



The
CHEMIST AND DRUGGIST

for RETAILER — WHOLESALE — MANUFACTURER

AUGUST 25, 1951

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The CHEMIST AND DRUGGIST

for RETAILER—WHOLESALE—MANUFACTURER

AUGUST 25, 1951

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Volume CLVI

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NEWS OF THE WEEK

Optical Instruction.—The Institute of Optical Science, announces that enrolment classes at its school, 8 Wilton Crescent, London, S.W.1, is being held at the school September 3 at 7 p.m.

Retail Trade in June.—Board of Trade figures show that average weekly sales by independent chemists during June were 11 per cent. higher than in May and 12 per cent. higher than in June, 1950. Sales of large-scale shops were 13 per cent. higher than a year ago.

Doctors Accept Offer.—The General Medical Services Committee of the British Medical Association at a meeting held in London on August 15 decided to accept the offer of the Minister of Health to refer the question of the size of central practitioner's pool to an independent third party (C. & D., August 11, p. 169).

Less Sugar for Manufacturers.—The Ministry of Food has announced that in order to save dollars it will be necessary to reduce sugar usage. Savings are to be effected by reducing the allocation to man-

ufacturers. Revised buying permits are being issued to manufacturers for the rationing period beginning November 4.

Import Licence Changes.—The Board of Trade have deleted chloramphenicol, acetic anhydride and monochloroacetic acid from the list of drugs, chemicals, etc., which may not be imported under open general licence. From August 21, therefore, no import licences will be required for these commodities. [Corrected note].

International Pharmaceutical Congress.—The fourteenth General Assembly of the *Fédération Internationale Pharmaceutique* is meeting in Rome, September 23-29. Among the delegates to the assembly are: Dr. C. H. Hampshire, London, who is to speak on "The International Pharmacopœia of the World Health Organisation"; and Professor H. Berry, London, who is to speak on "*Solutions pour injections: état actuel de la question des pyrogènes.*"

Veterinary Practitioners Spirit Regulations.—The Commissioners of Customs and Excise have made an Order (S.I., 1951

No. 1470) authorising registered veterinary practitioners (persons registered in the Supplementary Veterinary Register) to receive and use industrial methylated spirit. Chemists may, under the Order, sell industrial methylated spirit or articles containing it on signed orders or prescriptions issued by registered veterinary practitioners.

Conference Reminder.—The local committee of the British Pharmaceutical Conference, 1951, Harrogate, September 10-14 advise intending visitors to the Conference who have not yet applied for tickets to apply for them as soon as possible. Books of tickets for the Conference cost £5 5s. each, and day tickets £2 2s. each. Cheques should be made payable to the Harrogate Pharmaceutical Conference Committee and sent with applications to the local treasurer, Miss O. Windemer, 4 Royal Parade, Harrogate.

Examination Results.—The following candidates satisfied the examiners in the Qualifying examination of the Pharmaceutical Society held in Scotland in July:—

Anderson, Robert S.	Leviuss, Harold P.
Barker, William A.	Lund, Walter
Blagg, George L.	MacAuslan, Peter
Booth, Alan T.	Mellor, Gordon
Brookes, William T.	Mutch, William B.
Chatham, Warner G.	O'Neill, William
Chua, Sui Choo	Patel, Ramanlal C.
Cowan, Stanley M.	Robinson, Geoffrey
Doig, Robert G.	Somerville, Phyllis
Farthing, Maureen J.	Southworth, Leonard
Fletcher, Dorothea M.	Spencer, Geoffrey
Fulton, Kathleen	Sutton, Alice
Goldberg, Vivienne M.	Thomas, John
Hamilton, Alastair S.	Tune, David H.
Hutchinson, Basil H.	Watson, Thomas A.
Jackson, Joyce	Wilkinson, John R.
Jobson, William G.	Wolfson, Samuel B.
Leedam, Derek B.	Zanré, Alberto L.L.G.B.

Research Awards.—The Wellcome Pharmaceutical Research Fellowship adjudicating committee has appointed each of the following to hold the Fellowship for a further year, commencing October 1: Miss Mary Dawson, 19 Grahamshill Avenue, Airdrie, Lanarks, Messrs. G. P. Lewis, 61 Llandennis Road, Cardiff, J. R. Hodges, 11 Deane Way, Eastcote, Ruislip, Middlesex. Mr. D. B. Cowell, 16 Mill Park Avenue, Hornchurch, Essex, has been awarded a fellowship for the year 1951-52. —The Rammell Research Fellowship has been awarded for 1951-53 to Mr. A. Talentire, Ph.C., 6 Mansergh Street, Burnley, Lancs. He is to work in the Department

of Pharmacy, Manchester University on the behaviour of bacteria in systems of low moisture content.

Surgical Dressing Price Reductions.—The Surgical Dressings Manufacturers Association announces that, because of fall in the price of raw cotton, the price of cotton wool and of gauze issue has been reduced as from August 20. Examples of the new wholesalers' prices to retailers are as follows (reduction in price in parenthesis):—

Absorbent cotton wool, B.P.C.; not interleaved 1-lb., 8s. 1½d. (1½d.); 4-oz. packet, 8s. 7d. (1½d.); interleaved 1-lb., 8s. 3½d. (1½d.); 4-oz. packet, 8s. 9½d. (1½d.); absorbent cotton wool hospital quality, not interleaved, 1-lb., 5s. 11½d. (7½d.); interleaved, 1-lb., 6s. 2d. (7½d.); grey (unbleached) wool, 1-lb., 4s. 9½d. (4½d.); boris wool B.P.C., 1 doz. 1-lb. packets, 106s. (1s. 6d.), 1 doz. 4-oz. packets, 27s. 11d. (4d.); gauze and cotton tissue, B.P.C., 1-lb., 9s. 6½d. (2½d.); 4-oz. packet, 9s. 11½d. (2½d.); gauze and cotton tissue hospital quality, 7s. 2½d. (7½d.); cotton wool, ½-oz. sterilised; 1 dozen packets, 4s. 9d. (1d.); 1 doz. cartons, 4s. 11d. (1d.).

Key Industry Duty.—The Safeguarding of Industries (Exemption) No. 9 Order, 1951, (S.I., 1951, No. 1489), continues until February 19, 1952, the exemption from Key Industry Duty of all the articles exempted by previous Orders which expire on August 19. The following additions are made:—

Barium hydroxide; *o*-chloromononitrobenzene *n*-hexyl alcohol; tetraethylthiuram disulphide; tetraethylthiuram disulphide; thionyl chloride; *o*-Xylidine; zinc dibutylthiocarbamate.

Deletions include:—Ammonium bromide; benzyl cyanide; cellulose acetate (where the weight of the acetyl content, calculated as acetic acid, is less than 55½ per cent. but not less than 50 per cent. by weight of the cellulose acetate, not being cellulose acetate which is an ingredient or forms part of a composite article); *p*-chlorophenol; cobalt carbonate and sulphate; Dibenzthiazyl disulphide Dimethyl sulphate; 4:6-Dinitro-*o*-cresol (OH-1); ethylene glycol monobutyl ether; ethylene glycol monoethyl ether; ethylene glycol monoethyl ether; Diethylene glycol monobutyl ether; Diethylene glycol monomethyl ether; Diethylene glycol monomethyl ether; acetates and phthalates of: ethylene glycol monoethyl ether; Diethylene glycol monobutyl ether; Diethylene glycol monoethyl ether; diethylene glycol monomethyl ether; acetates of: ethylene glycol monobutyl ether; ethylene glycol monomethyl ether; hydroquinone mercaptobenzthiazole and 2-naphthyl benzoate.

The Treasury have also made the Additional Import Duties (No. 4) Order, 1951 continuing the exemption of acetone from additional duty under the Import Duties Act, 1932 to February 19, 1952.

LOCAL NEWS

Camera Thefts from Pharmacies.—

Cameras have been stolen recently from the shops of W. J. Peacock, Ltd., Boots, Ltd., and Mr. A. E. Pearce, M.P.S., High Street, Sittingbourne, Kent.

Slough Course in Pharmacology.—A series of lectures on pharmacology and therapeutics starting on November 6 have been arranged by the Slough Branch of the Pharmaceutical Society.

Conference on ACTH.—The Armour Laboratories, Lindsey Street, London, E.C.1, are organising a conference on ACTH for doctors to be held in Harrogate on September 13 and 14. Papers are to be read on the application of ACTH to various diseases, and during the conference two sound colour films will be shown.

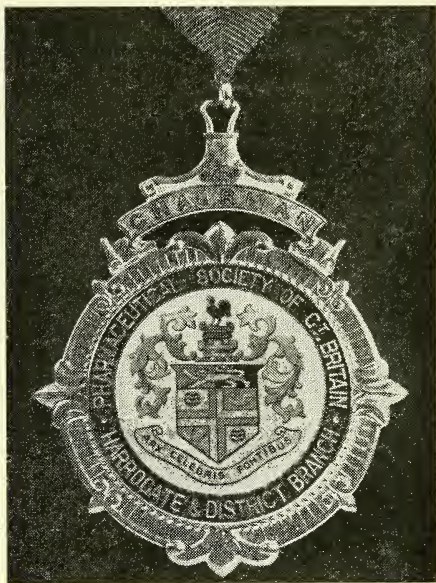
New Sulphur Recovery Plant.—Shell Chemicals, Ltd., is installing a sulphur recovery plant at its refinery at Stanlow, Cheshire. It is estimated that 10,000 tons of sulphur per annum will be recovered from the hydrogen sulphide which is a by-product of petroleum cracking. In addition an acid plant is being installed to convert waste sulphuric acid sludge into fresh acid. 5,000 tons per annum of sulphuric acid are expected to be saved in this way.

Test Mixture Decanted.—Sheffield Executive Council have imposed a monetary penalty upon a Sheffield chemist who decanted a mixture of mist. sod. salicyl. in order to supply a clear preparation. In a letter to the Pharmaceutical Service Committee the chemist explained that the cold weather had prevented all the bicarbonate of soda from dissolving and, since he believed that a repeat prescription should always appear as before, he decanted the mixture, the patients' "psychological appreciation of a placebo" being in his opinion as important as its analytical control.

Leeds Meeting on Pricing.—At a meeting of the Leeds Executive Council recently, Mr. R. C. Halliwell (representative of the West Riding on the Joint Pricing Committee for England) stated that the Ministry of Health owed over £50,000 to Leeds chemists for ten months' arrears in prescriptions. It would be impossible to catch up with the arrears, he said, particularly in view of the number of prescriptions dispensed during the influenza epidemic in January. He urged that some

arrangement should be made to clear up the arrears and hoped that the chemists and the Ministry would work together.

Harrogate Activities.—The badge of office of the chairman of the Harrogate Branch of the Pharmaceutical Society illustrated below was presented to the



branch recently. Three members of the branch are serving on the West Riding Pharmaceutical Committee and include the recently appointed vice-chairman Mr. L. T. Fletcher, manager, Timothy Whites & Taylors, Ltd., Beulah Street, Harrogate.

OUTINGS

Middlesbrough Works Staff.—The staff and employees of Middleton & Co., Ltd., Middlesbrough, were the guests of the directors on an outing to the Lake District, held on August 12 to celebrate the company's fiftieth anniversary. The managing director (Mr. T. R. Scholfield), and two other directors accompanied the party. Lunch was taken at Bowness and tea at Glenridding, Ullswater.

Visit to Birdsgrove House.—Members of the Bolton Pharmaceutical Association and their friends paid a visit to the Pharmaceutical Society's convalescent home, Birdsgrove House, Ashbourne, Derbys, on August 12. They were shown over the house and grounds by Miss M. C. Jones (warden). Particular attention was paid to research work concerned with digitalis and stramonium being carried out in the gardens. Later the party were entertained to tea at the house.

SCOTTISH FESTIVAL LIBRARY EXHIBITION

THE Festival of Britain Exhibition of Eighteenth Century Scottish Books, comprising books on loan from eleven libraries, was opened in Edinburgh on August 3. One section of some forty-nine exhibits deals with medicine and anatomy. The exhibits are placed at eye level in well-designed "picture-frame" show cases. One exhibit is the "Conspectus Medicinæ Theoreticæ. Ad Usum Academicum," by James Gregory, printed in Edinburgh by W. Creech in 1782 (two 8 vo. volumes). The first had appeared by itself in 1780. It was a widely read text book at the universities. James Gregory (1753-1821) is perhaps better remembered as the originator of "Gregory's mixture." A second edition copy of the "Comparative view of the State and Faculties of Man with those of the Animal World," by his father, John Gregory, is also on view. A volume by William Alexander, an Edinburgh surgeon, printed in 1768, contains "Experimental Essays on The External Application of Antiseptics in Putrid

Diseases: on the Doses and Effects of Medicines; and on Diuretics and Sudorifics" is also shown. An exhibit of pharmaceutical interest is a first edition copy of "Tippermalluch's Receipts," by John Moncrieff, Tippermalluch, and described on the title page as "Being a collection of many useful and easy remedies for most distempers." Other exhibits include the "Pharmacopœia Collegii Regii Medicorum Edinburgensis," bound in calf with the Arms of the Earl of Bute; the "Pharmacopœia Edinburgensis Pauperum" or the "Dispensatory for the use of the Royal Hospital of Edinburgh," printed in 1753; William Buchan's "Domestic Medicine" or "A Treatise on the Prevention and Cure of Diseases by Regimen and Simple Medicines"; and "The whole Works. Wherein are discovered the true foundation and Principles of the Art of Physic," done from the Latin original by George Sewell and J. T. Desaguliers. "The whole Works" are those of Archibald Pitcairne (1652-1713).

ABERDEEN CIRCULAR TO M.P.s

THE Aberdeen Pharmaceutical Association have issued a memorandum on resale price maintenance, copies of which they are sending to Members of Parliament for the district. The memorandum states that the Association deprecates the Government's proposed departure from the findings of the "Lloyd Jacob Committee" in respect of branded articles. Through advertisement, makers aimed to obtain the manufacturing economies, a uniform output, and provide a high quality product at low cost and of constant quality. The public preferred to buy branded articles. Price-cutting in popular lines would follow the Government's proposal, and the disruption of trade in those lines would bear heavily on the retail pharmacist who had to carry in addition a wide range of relatively slow selling but important lines and offer skilled technical advice. The pharmacist was often the means of turning a customer towards proper medical attention and treatment. The time given by a pharmacist in explaining to a member of the public exactly why, for example, penicillin lozenges cannot be supplied except when ordered by a medical practitioner, was time spent in the public interest.

The Proprietary Articles Trade Associa-

tion has been the means of medicines being handled and sold, on the whole, by the pharmaceutical profession, the "only body of persons qualified to be entrusted with the supply of medical preparations." The P.A.T.A. had also encouraged a spirit of co-operation within the pharmaceutical profession, to the public benefit.

The Government memorandum re "Terms of Remuneration for the Chemist," under the National Health Service, took into account the fact that certain on-cost maintenance is financed by a percentage of the profits from other sources of the Chemists' business. Should that profit be reduced it would have a direct bearing on the costs of the National Health Service in that any reduction in the present over-all profits of the pharmacy will have to be made good by increased cost of dispensing prescriptions. The operation of "free-for-all" trading would result in adverse conditions for shop assistants.

The Association thinks that a fair way to attack the evil of monopolistic price levels is to introduce legislation, providing for prices at the manufacturing, wholesale and retail levels, to be agreed by trade boards appointed by the Government and the trades concerned.

TOPICAL REFLECTIONS

Man-power Report

The "separate investigation which is being undertaken" for the Council of the Pharmaceutical Society regarding man power gives the pronouncement abstracted on pp. 223-25 of your issue of August 18 the character (as you suggest) of an interim report, extending that presented at last year's meeting of the British Pharmaceutical Conference. The phraseology may be described as occasionally fluffy, and an element of the hypothetical figures here and there. "Much virtue in 'if'," as we read in "As You Like It." All the same, your abstract should be studied. In order to refresh my memory on previous Council thoughts on man power I went back to Part One of the report of the Committee of Inquiry set up by the Council in 1937 (a document "not to be reproduced either wholly or in part"). The section "Employment in Retail Pharmacy" (p. 15) and Appendix 4 (p. 24) contain, allowing for the differences in the value of money then and now, facts worth recording again. One point that I have not seen mentioned concerning shop service is loss by voluntary change, before the average age of retirement, to other vocations: is this a quite negligible factor? For the rest, I agree that the difficulty of obtaining locums is serious, and that the supply of medicines and appliances outside the National Health Service is not likely to increase—at any rate, in the near future. About the volume of N.H.S. work in pharmacies having reached or almost reached its peak I am not sure.

Conference Science Papers

This year's Conference science papers, a list of which is printed on p. 207, number, as last year, twenty-one. Bacteriology, with the associated sterilisation, accounts for at least six of these, and the time allotted to discussing the monographs alluded to will no doubt be well spent. Tablets have suggested two papers (as they did last year): interest in this subject seems as great as ever. Chromatography is mentioned in only one title, but will probably figure elsewhere also. Recent work on insulin has produced three papers. I need not extend this examination of a typical list, except to add that "Pharmaceutical Formulation" is the subject of the Symposium Session, thus in effect continuing a discussion begun at the 1950 meeting of the Conference. This paragraph must not end without attention being called to the cordial letter

of the Mayor of Harrogate (p. 221) welcoming the Conference to his town. Though many members of the Conference may have passed through Harrogate only once (with a party from Leeds in 1934), it has sometimes occurred to me and to others that it makes an attractive setting for any such assembly as that of next month. The illustrated article on the town and its mineral waters in your Annual Special Issue of June 30 (pp. 843-46) confirms this impression.

Two Bloomsbury Churches

The Executive of the National Pharmaceutical Union has made history, if I am not mistaken, in resolving (p. 212) to subscribe annually to the Church of St. George the Martyr, not many yards from the Union's headquarters. As is known, Queen Square was a fashionable place of residence in the eighteenth century. Its church was built, by private subscriptions, in 1706 as a chapel of ease to the Church of St. Andrew in Holborn. In Walford's "Old and New London" (IV.554) a statement is quoted to the effect that the subscribers intended to reimburse themselves by the sale of the pews. But the matter was taken out of their hands, a few years later, by the commission appointed to provide new churches in London; this authority had the building converted into a parish church. The name of the saint was chosen partly in compliment to one of the founders, who had been governor of Fort St. George, and partly to distinguish it from St. George's Church in Hart Street, a thoroughfare now renamed Bloomsbury Way. Anyone who walks round the neighbourhood can see that the latter building is about the same distance from the Galen Place entrance to 17 Bloomsbury Square as the Queen Square building is from the main entrance to the N.P.U. headquarters. Why, then, should not the Pharmaceutical Society follow the example just set? True, the church in Bloomsbury Way is aligned on a north-south axis, and has the derided statue of King George the First at the top of the steeple; but what of that? The best of the satirical couplets written soon after the statue was erected is, I think, the one mentioning the brewer, a Mr. Hucks, who was said to have paid for it. In this poetical effort it is claimed that to the title "Head of the Church" the good brewer added one title more, "Head of the Steeple."

Xrayser

NEW COMPANIES

E. MARGERRISON, LTD. (P.C.).—Capital £7,500. To carry on the business of pharmaceutical chemists, etc. Ernest Margerrison, M.P.S., and Fannie Margerrison, directors. R.O.: 45 Market Street, Oaken-gates, Salop.

JOHN LYLE (CHEMISTS), LTD. (P.C.).—Registered in Edinburgh. Capital £6,000. To carry on the business of wholesale and retail chemists, etc. Margaret W. Lyle, James Arthur, and David Brown, 258 Perth Road, Cowdenbeath, directors.

DONALD WARREN, LTD. (P.C.).—Capital £100 in £1 shares. To carry on the business of retail and manufacturing chemists, etc. Donald C. Warren, M.P.S., and Winifred M. Warren, directors. R.O.: 7 London Road, St. Albans, Herts.

W. IVINSON, LTD. (P.C.).—Capital £2,000. To acquire the business of a dispensing chemist carried on by Wilfred Ivinston, M.P.S., at 88 Church Street, London, N.W.8. Wilfred Ivinston and Sybil M. Ivinston, directors.

C. KEMBERLEY (CHEMISTS), LTD. (P.C.).—Capital £8,000. To carry on the business of wholesale and retail chemists, etc. Frederick E. R. Nichols, M.P.S., and John J. Williams, M.P.S., directors. R.O.: 7 High Street, Kingswood, Bristol.

B. S. INSKIP (CHEMISTS), LTD. (P.C.).—Capital £2,000. To carry on the business of wholesale and retail chemists and druggists, etc. Daisy W. Inskip, Peter S. Inskip, Jas. H. Penfold and Suzanne Lees, directors. R.O.: 2 Marlborough Place, Brighton.

DONALD LEAVER, LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturers of and dealers in new and second-hand machinery for the chemical and allied trades, etc. Donald T. M. Leaver and Sydney P. Richfield, directors. R.O.: 59 Sloane Street, London, S.W.1.

GORDON HARRIS, LTD. (P.C.).—Capital £4,000. To carry on the business of chemists and druggists, etc. Gordon Harris, M.P.S., Mary M. Harris, Constance E. Harris and Edgar H. Morling, M.P.S., directors. R.O.: Offices of Ernest J. George & Co., 329 High Holborn, London, W.C.1.

SWANN-MORTON SURGICAL INSTRUMENTS, LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturers of and dealers in surgical and scientific instru-

ments, etc. Walter Crookes, Harry Sieve-wright, Cyril G. Booth and Leonard Calverley, directors. R.O.: Penn Works, Owlerton Green, Sheffield, 6.

J. PAUL (CHEMISTS), LTD. (P.C.).—Capital £1,000. To carry on the business of wholesale and retail chemists. Joshua Paul, M.P.S., and Myra Paul, directors. R.O.: 130 High Holborn, London, W.C.1.

LUMBY'S (CHEMISTS), LTD. (P.C.).—Capital £2,500. To carry on the business of chemists and opticians, etc. Roland Lumby, Roland B. Lumby, and Dilys N. Edwards, directors. R.O.: Cambridge Arcade, Southport.

Company News

BORAX CONSOLIDATED, LTD.—An interim dividend of 2 per cent. on the larger deferred ordinary capital (4 per cent. or smaller capital) is recommended.

UNITED SULPHURIC ACID CORPORATION LTD.—Capital requirements are now estimated at £4.2 millions. Of this, £1.2 millions will be subscribed in ordinary shares by eleven companies who are large users of acid, in proportion to their agreed purchases. They have also undertaken to subscribe for a further £1.2 millions ordinary capital, if this should become necessary. The remaining £3 millions is being raised by a debenture stock.

PETROCHEMICALS, LTD.—In a statement with the full accounts for the year ended June 30, 1950 Sir Robert Renwick (chairman) explains that he expects that "current expenditure will be covered by current income before the end of 1951." Next year he thinks that net earnings, after providing for depreciation, should more than cover interest on the outstanding loan stocks and indebtedness. The accounts show that there was an accumulated debit of £1,049,889, an increase during that year of £833,048. Heavy running-in costs continued during the past year and the chairman points out that an accumulated debit "in excess of £2,000,000" must be expected in the accounts for the year ended June 30.

BUSINESS CHANGES

W. MATHER, LTD., Dyer Street, Chester Road, Manchester 15, have disposed of the whole of the goodwill, trade marks, trade names and patent rights of their business to Edward Taylor Ltd., Morton, Eccles Manchester.

MARRIAGES

Golden Wedding.—NOBLE—MELVILLE.

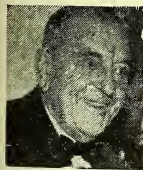
—On August 22, 1901, Charles Arthur Noble, M.P.S., to Mollie Melville. Present address: 3 St. Margaret's Road, Edgware, Middlesex.

PARR—BLAMPEY. — At St. Alban's Church, Bournemouth, on August 18, Peter John Parr, B.Pharm., 129 West Way, Bournemouth, to Avis Blampey, Bournemouth.

DEATHS

COOK.—At Hill End Hospital, St. Albans, Herts, on August 14, Mr. Harold Percy Cook. Mr. Cook was for over ten years confidential and managing clerk to C. F. Gerhardt, Ltd., 5 Fenchurch Street, London, E.C.3. He is survived by his wife, a daughter and a son, Mr. L. N. Cook, M.P.S.

CUSSENS.—On August 20, Mr. Alexander Tom Cussons (chairman, Cussons, Sons & Co., Ltd., Kersal Vale, Manchester), aged seventy-six. Mr. Cussons was educated at Wakefield Grammar School. It was intended that he should enter his father's business of retail chemist at Ossett, Yorks, but sitting in a shop and waiting for customers did not appeal to him so he tried his hand at selling, in neighbouring towns, a consignment of combs which his father had purchased. His immediate success in that small venture fired his enthusiasm for the commercial side of the family business. He soon added manufacturing to his merchanting activities and gradually built up a business of his own and in due course absorbed other businesses in similar and ancillary trades. In 1912 he first commenced soap making and his business continued to develop until by 1931 he had three factories in England and one in South Africa, and was manufacturing glass bottles, printed metal boxes, collapsible tubes and plastic containers for his toilet preparations. He was an enthusiastic believer in exports and in 1914 made his first of many visits to Canada and the United States. He subsequently visited South Africa and India and in this way laid the basis for the present extensive export trade of his company. Rationalisa-



tion and concentration of effort followed in due course and his business now situated in modern buildings at Kersal Vale, Manchester, was floated in 1947 on a capital value of one and a quarter million pounds. Mr. Cussons has collected tropical fish but his leading hobby was the cultivation of orchids. He was a supporter of the Lancashire Cricket Club and of the Swindon Rugby League Club. He married in 1900. He is survived by his wife, daughter and two sons. All of his children are still closely associated with the family business.

GODDARD.—In Cornwall suddenly on July 24, while on holiday, Mr. Frederick Charles Goddard (managing director, Florogen, Ltd., Mitcham, Surrey) aged sixty. Mr. Goddard founded the Florogen business and started in perfumery forty-five years ago, when he first joined Morny Freres.

LOGIE.—At Chester, on August 20, Mr. Robert Aikman Logie (a director of C. F. Gerhardt, Ltd., Fenchurch Street, London, E.C.3). Mr. Logie had been with the company for fifty years. He was a bachelor.

Mr. O. F. C. Bromfield (former Editor of THE CHEMIST AND DRUGGIST) writes: It was my good fortune to meet "Logie"—as he was affectionately known by his colleagues in the "Lane" and throughout the drug trade—when I first commenced reporting on the London drug market in 1926 for THE CHEMIST AND DRUGGIST. I quickly learned to respect his views on the markets of a wide range of Eastern, Continental and American commodities as those of an expert. His knowledge was always available and given with the utmost freedom and candour. Absolute genuineness was the cornerstone of his reputation and the high regard in which he was held by his colleagues, by buyers representing the manufacturing houses, and exporters and importers in many parts of the world. From the palmy days when the drug trade met to transact business on the floor of the Royal Exchange, London, and public auctions were held in the commercial saleroom, up to the time of his last illness Mr. Logie jealously guarded the great tradition on which London became established as the clearing house for the world's supplies of crude drugs, etc. While mourning his passing I, like his wide circle of friends at home and overseas, will cherish the memory of a good and lovable man.

A PHARMACIST FROM ABADAN

MR. K. J. FROST, M.P.S., Hereford (pharmacist in charge of the manufacturing department of the hospital dispensary of the Anglo-Iranian Oil Co., Ltd., Abadan, Persia) was interviewed by a representative of the editorial staff of *THE CHEMIST AND DRUGGIST* on his return to Britain at short notice from Persia recently. Describing the hospital, he said that it is modernly equipped, has 300



beds, and is staffed by about 60 doctors, (British, Indian and Persian), 120 Iranian nurses supervised by British sisters, and three pharmacists. The out-patient clinics treat approximately 1,000,000 patients, mostly natives, annually. In addition to dispensing medicines required for the hospital, out-patient and clinics, the dispensary supplied about a dozen Persian clinics and hospitals at Teheran and Isfahan.

Well Equipped Dispensary

Drugs and medical supplies usually took four months to reach Abadan from Britain from the time of their being ordered, and when stocks ran short the dispensary made their own tablets and ointments. The manufacturing department was equipped with modern machinery capable of handling large batches of those products. The medical stores of the company carried a vast and comprehensive range of products and equipment. D.D.A. products were stored in separate and locked premises, but despite that safeguard the whole of the stocks were stolen on one occasion and fresh supplies had to be flown out from Britain. The large bulk of the medical supplies used were of British make. The work of the pharmacists at the hospital was very interesting, he said, and special problems arose from the fact that shade temperatures sometimes reached 128°F. Conditions for pharmacists he described as very good "but as in most parts of the world accommodation is one of the chief difficulties." The cost of living was "very

high." In addition to his purely pharmaceutical duties Mr. Frost lectured at the hospital's nursing school.

Persian pharmacies, Mr. Frost said, are run on the French style and are mostly stocked with European and American products. Little effort seemed to be made to introduce British pharmaceutical products into the Persian market although a few British manufacturers had agents in the country. Persian pharmacists were trained at the Faculty of Pharmacy at the University of Teheran. When they qualified they were entitled to be called Doctors of Pharmacy and, in fact, said Mr. Frost their status was on a level with doctors of medicine although their training and qualifications were not comparable to the British chemist and druggist qualification. Persian pharmacists in some areas carried stethoscopes, thermometers and other equipment of a doctor of medicine, and examined, prescribed and dispensed for their patients. The French Pharmacopœia was used, and generally prescriptions and all labels were in French.

Mr. Frost hopes to return to Abadan in due course.

PERSONALITIES

MR. EDWARD W. TWISS, M.P.S., Latchford, Warrington, founder of Twiss & Co., chemists, Latchford, has been appointed a magistrate for Warrington.

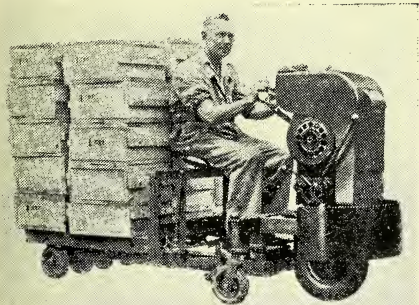
PROFESSOR E. C. DODDS, M.V.O., F.R.S. (Courtauld professor of biochemistry, University of London, and director, Courtauld Institute of Biochemistry, Middlesex Hospital, London), has been re-elected a vice-president of the Royal Society of Arts.

MR. J. F. RANKIN, M.P.S.N.I., who was married in Belfast recently, is engaged with his father in the business of W. J. Rankin & Son, wholesale chemists' and manufacturers' agents, Belfast. He qualified in January 1950.

MR. R. L. BAINES, 130 Tessall Lane, Birmingham, 31 (chief pharmacist, Kidderminster General Hospital) took part in a walk in Algeria, about which the B.B.C. are making a series of broadcasts, the first being on August 12. Mr. Baines got himself lost in a cave during the ramble and in the broadcast on August 19 that was referred to.

MACHINERY AND PLANT

Power Trucks.—Wessex Industries (Poole), Ltd., Dolphin Works, West Street, Poole, Dorset, are the manufacturers of a 3-h.p. hydraulic stillage truck capable of



lifting and carrying a 1-ton load, either on its own steel plate platform (4 ft. x 2 ft. 6 in.), or on stillage platforms. The hydraulic pump gives a lift of 3 ft.

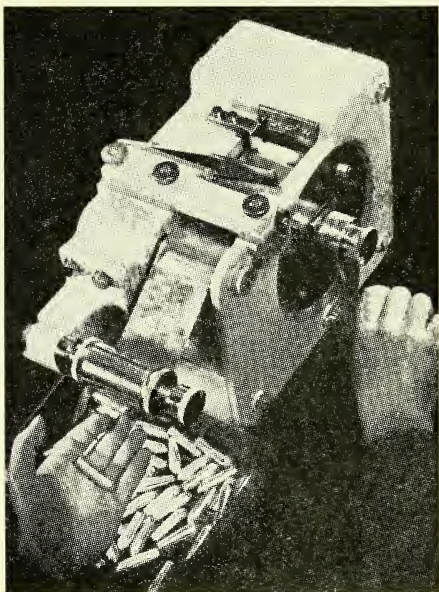
Feed Unit for Tableting Machines.—An elevator feed unit suitable for use with the rotary tablet machines issued by Manesty Machines, Ltd., Speke, Liverpool, 19, ensures that the supply of granules is maintained with minimum supervision. The unit consists of a main hopper in which are mounted a number of buckets carried by chain. The buckets convey the granules to the chute leading to the feed frame, any overspill falling back into the hopper.

Neon Indicator Lamps.—For machinery and instruments that require indicator or pilot lights (for example, to show whether it is switched on or off), the advantages claimed for Acru neon indicator lamps are that they are small, may be used directly on mains voltage up to 440 volts, and for fitting require only one $\frac{1}{2}$ -in. hole. The makers are Acru Electric Tool Manufacturing Co., Ltd., 123 Hyde Road, Ardwick, Manchester, 12.

Vibrating Table for Packaging Powders.—The Kolt vibrating table, issued by Kolt Engineering Co., 70 Victoria Street, London, S.W.1, provides the high-frequency, small-amplitude vibrations essential for speedy settling of powders in filling into packaging. The effect is quick and automatic; the table requires no maintenance and has a negligible current consumption. Containers of all shapes, sizes and materials can be effectively vibrated with the vibrating table.

Overhead-chain Conveyors.—The essential features of the systems of conveyors installed by Herbert Morris, Ltd., Loughborough are the overhead track, endless chain, and moving trolleys bearing carriers. The shape of the carrier is adapted to the needs of the industry and the track goes up or down or round about to suit the layout and arrangement of departments. A booklet issued by the company includes an illustration of an actual Morris conveyor installed in a warehouse.

Machine for Foil Wrapping.—Special features claimed for the Aupana wrapping machine illustrated, which is supplied by Ideal Packagings, Ltd., 237 Kensington High Street, London, W.8, are perfect wrapping by a single turn of a handle, up to five times higher efficiency than hand



wrapping, and the ability to wrap objects of nearly any form or size with plain tin or aluminium foils. Its output is from 1,200 to 1,500 wraps per hour, according to the skill of the operator. The product to be wrapped is placed by hand on foil cut direct from the reel. After one turn of the handle the wrapped object falls into the receiver at the base of the machine.

TRADE NOTES

Inquiries Invited.—C. A. Stokes & Co., Ltd., 19 Feeder Road, Bristol, 2, offer to send particulars of their complete range of Eclipsol hair and toilet preparations, etc., to members of the trade on application.

A Christmas Line.—Chilton Electric Products, Ltd., Hungerford, Berks, give details on another page of their Kub electric shaver. Orders for Christmas should be placed early.

Display Bonus Terms.—The International Chemical Co., Ltd., Chenies Street, London, W.C.1, give details on another page of bonus terms on their products.

A New Display Container.—Burroughs Wellcome & Co., 183 Euston Road, London, N.W.1, give details on another page of a display dispenser outer for Codemprin tablets. It contains two dozen tubes of the tablets.

Again Available.—Solport Bros., Ltd., 44 Spencer Street, London, E.C.1, announce that they are able to reintroduce loofah bath gloves, straps and pads under their pre-war registered trade mark "Rub-a-Dub."

Purchase Tax Changes.—HERTS PHARMACEUTICALS, LTD., Welwyn Garden City, Herts, Thioparamizone and Ethizone exempt.—WARD, BLENKINSOP & Co., LTD., 6 Henrietta Place, London, W.1, Steramide-Ag, 15 c.c. and 25 c.c. bottles, and Steravite, 1 dr. tubes exempt.—CLINICAL PRODUCTS, LTD., 2 The Green, Richmond, Surrey, Menopax tablets exempt from September 1.

Brighton Christmas Show.—K. A. Thiel, Ltd., 2 York Villas, nr. Seven Dials, Brighton, 1, welcome visitors from the retail trade to their Christmas show-room which will be held at the Hotel Metropole, Brighton, from Wednesday, September 5 to Thursday, September 13.

New Price List Issued.—Sharp & Dohme, Ltd., Hoddesdon, Herts, state that all chemists in Great Britain and Northern Ireland should have received the new price list covering changes operative from September 1. They invite any chemist who has not received the list to send for a copy.

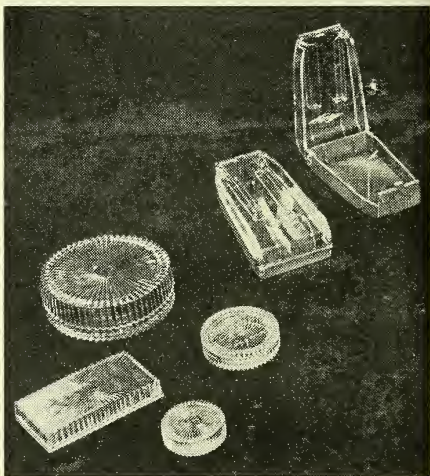
Service to Branch Secretaries.—Imperial Chemical (Pharmaceuticals), Ltd., Fulshaw Hall, Wilmslow, Manchester, state that they have a selection of films available suitable for showing to pharmaceuti-

cal audiences, and they offer help to secretaries of local branches of the Pharmaceutical Society, etc., in arranging film programmes with or without speakers.

New Air Purifier.—W. & F. Walker, Ltd., Riley Street, Chelsea, London, S.W.10, have introduced a new and improved model of their Rotosan air purifier. Filled with perfumed crystals, the Rotosan container is in moulded plastic with louvres to allow air circulation and is obtainable in four pastel shades. A single concealed screw fixes the container to the wall. Alternatively it may stand on a shelf.



Aid for the Plastics Industry.—A new British polystyrene plant is now in full-scale operation at Partington, Manchester. The plant, owned and operated by Styrene Products, Ltd. (a company formed



jointly by Petrochemicals, Ltd., and Erinoid, Ltd.), was designed, engineered and constructed by Petrocarbon, Ltd. The polystyrene (marketed under the Erinoid trade name) is supplied in the form of moulding powder, sheet and rod. Amongst the many applications of that plastic are:

Deaf aids; cosmetic containers, bottles and closures; vacuum flask tops; camera cases. The product has the ability to "pipe" light, even through changes of direction, and this enhances its value for use in display signs and other transparent mouldings. It is unaffected by moisture; it has a good resistance to heat. The colours range from crystal clear to transparent, pastel and dense shades, and black. All the colours, the makers state, are bright, clear, and heat and light resisting. The products can be cemented together, sawn, machined, turned, milled, painted or lacquered. Erinoid, Ltd., Stroud, Glos, are responsible for the marketing of the products both in the United Kingdom and overseas.

New Products and Packs.—BAYER PRODUCTS, LTD., Africa House, Kingsway, London, W.C.2, have redesigned the pack of Bayer aspirin. The new pack in its dis-



play outer is illustrated.—WILLIAM EDGE & SONS, LTD., Bolton, Lancs, give details on another page of a new bottle for Drummer pine disinfectant "shaped for safety." —J. C. & J. FIELD, LTD., 123 The Broadway, London, S.W.19, are marketing Field's shampoo in a new form containing Kalol. The shampoo rinses out all lime soap from the hair.—IMPERIAL CHEMICAL (PHARMACEUTICALS), LTD., Gloucester House, 149 Park Lane, London, W.1, are introducing Avlon penicillin ointment, B.P., in tubes containing 1 oz. The pack includes an easily detachable label for help in dispensing. The company is also introducing Avlon brand penicillin lozenges, B.P., and Avlinox frothy bloat remedy for use by veterinary surgeons. —LAMARNE LABORATORIES, LTD., 20 High Street, Sutton, Surrey, are marketing a new adrena-line cream Adralene details of which are

given on another page.—THE CHAS. H. PHILLIPS CHEMICAL CO., LTD., 179 Acton Vale, London, W.3, are supplying Milk of Magnesia tablets in a new size retailing at 9d.—WARD, BLENKINSOP & CO., LTD., 6 Henrietta Place, London, W.1, give details on another page of Sterathal suspension containing phthalyl sulphacetamide, pectin and kaolin. The preparation is flavoured to be readily acceptable by children and adults. —WESTMINSTER LABORATORIES, LTD., Chalcot Road, London, N.W.1, are introducing Senokot granules containing the active constituents of senna pods assayed chemically and biologically and containing cocoa malt and sugar in sufficient quantities to make the product palatable. Each 100 gm. of Senokot contains the active constituents of 15 gm. Alexandrian senna pods, B.P. The product is packed in containers of 2 oz. and 2 lb. 1 oz. provides approximately eighteen level teaspoonfuls. The preparation of the granules is based on published research.—CIBA LABORATORIES, LTD., Horsham, Sussex, have issued Nupercaine cream containing 1.1 per cent. Nupercaine (cinchocaine) hydrochloride in a non-greasy, water-miscible base specially formulated to facilitate absorption. It is indicated for inflamed and irritated conditions of the skin and mucous membranes.

Guidance to Company Secretaries.—In a 16-p. booklet "Control and Reconciliation of National Insurance Contributions," Roneo-Neopost, Ltd., Victoria House, Southampton Row, London, W.C.1, describe methods of checking and supervising the payment of such contributions applicable to almost any business undertaking.

Decorative Ribbon for Packaging.—By laminating rayon filament yarn to Clarifoil transparent film, Porth Textiles, Ltd., Dinas Rhondda, Glam, have produced in Silsheen a new decorative ribbon for packaging. The ribbon is available in various widths and finishes, or as multi-colour ribbon, plain or embossed.

Health Ministry Display Set.—A set ("Food Poisoning") is available in the Ministry of Health series on health education subjects "with a preventive approach." The set consists of twelve panels of stiff card, 15 x 12 in., with photographs, coloured sketches and of text. Application for not more than one set initially should be made to the Circulation Section, Publications Division, Central Office of Information, Block 2, Montagu Mansions, Crawford Street, London, W.1.

BRITISH ASSOCIATION EDINBURGH MEETING

LINKED to the Festival of Britain, the 113th Annual Meeting of the British Association for the Advancement of Science at Edinburgh, August 8-15, concentrated on the progress of science during the past century. SIR CYRIL HINSHELWOOD (For. Sec. R. S.) in his presidential address to the chemistry section reviewed chemistry at the mid-century. There had been a vast evolution of chemical theory, a perfection of the arts of synthetic chemistry, and a growth of the conception of energy, and knowledge of its laws during the past 100 years. The chemist now stood face to face with the problem of life itself. The chemist's knowledge of the architecture of the molecule had enabled the subtlest agents of biochemical function, such as adenosine triphosphate to be built up.

Control of Cancer

It was possible that the control of cancer might emerge from the detailed chemical study of cell mechanisms. The good wrought by drugs, antiseptics and anaesthetics in saving lives and alleviating suffering far outweighed the evil which explosives and poison gases caused in wars. The understanding of the laws of energy, and the application of physical ideas had led to the control of the processes on which chemical manufactures depended. The selective influencing of cell processes occurred in many ways and opened the door to the great practical field of chemotherapy, which was still in its infancy but it too had its sinister aspect. As the cell reactions disclosed their secrets, as physiology advanced and as the relation of chemical structures to effect on cell and tissue clarified itself, there would emerge the possibility of deep-seated chemical intervention into processes which were now normally inviolate. The day might well come when conscious moulding of individuals and even of races would present problems of fearful fascination. The president was followed by PROFESSORS F. A. PANETH, F.R.S., on "The Trend of Inorganic and Physical Chemistry since 1850" and A. R. TODD, F.R.S., on "Developments in Organic Chemistry During the Past 100 Years." MR. H. W. CREMER, C.B.E., (president of the Royal Institute of Chemistry) opened a discussion on "The Changing Face of the Chemical Industry." The different techniques required by pharmaceutical products etc., he said, com-

pared with the "heavy" chemical industry had led to better working conditions. DR. R. ROFFEY (controller of research and development, Distillers, Co., Ltd.) dealt with the production of chemicals from petroleum. The oil industry, by a combination of cracking and distillation produced mainly ethylene, propylene, the butylenes and butadienes. The second step was the synthesis of the required chemicals from those olefines and that was done by the petroleum chemical industry.

Recent work on the adrenocortical steroids, on the antimalarials and on the thyroid gland was described respectively by PROFESSOR G. F. MARRIAN, F.R.S., DR. F. L. ROSE and DR. R. V. PITTRIVERS in a discussion entitled "Organic Chemistry in the Service of Medicine." Professor Marrian predicted that the total synthesis of cortisone and the other adrenocortical hormones might soon be achieved. Definite evidence had been obtained that those hormones could be derived from cholesterol and the results further suggested that progesterone might be an intermediary in the transformation. If reliable methods were available for the quantitative determination of the metabolites of the adrenocortical hormones which were excreted in the urine, valuable information could be obtained about the secretory activity of the adrenal cortex. It was unlikely that such methods would be developed until the chemical nature of the metabolites had been investigated more fully. A discussion on "The Hormones of the Pituitary" was introduced by PROFESSOR J. H. GADDUM, F.R.S.

Visits

In the Education section, DR. P. F. R. VENABLES (Salford Technical College) compared technical education in the United States and Great Britain. During the meeting visits were made to W. Thyne, Ltd., carton manufacturer, Edinburgh; the Crewe Toll factory of Ferranti, Ltd.; The Institute of Seaweed Research, Inveresk Gate, Musselburgh; British Petroleum Chemicals, Ltd., Grangemouth, Stirlings; chemical works of T. & H. Smith, Ltd., Edinburgh; D. C. L. yeast factory and research out-station, Glenochil, Menstrie, Clackmannans; Scottish Oils, Ltd., Pumphreston Refinery, West Lothian; and Imperial Chemical Industries, Ltd., (dye-stuffs division), Grangemouth.

CONFERENCE ON T.B. CHEMOTHERAPY

A COLLOQUIUM on the chemotherapy of tuberculosis was held in Dublin, recently, under the auspices of the Medical Research Council of Ireland.

DR. E. LEDERER, Paris, in a lecture on the chemistry and bio-chemistry of the tubercle bacillus, pointed out that the composition of *Mycobacterium tuberculosis* depended on the culture medium. The composition also changed with the age of the bacterial culture — four-day-old cultures contained a lipid substance toxic for mice while cultures four weeks old did not contain that substance. Until recently all analyses had been carried out on bacteria grown in synthetic media but it now seemed certain that pathogenic organisms grown in a host had a different composition. A characteristic feature of *Mycobacteria* was acid-fastness. Present evidence indicated that during staining fuchsin entered the cell and probably formed a complex salt with free mycolic acid and that the cell wall was impermeable to acid alcohol.

Search for compounds

DR. V. C. BARRY, Ireland, reviewed the origin of compounds found to be of chemotherapeutic value in tuberculosis in guinea pigs. He had first approached the problem through the lichen product roccellic acid, a succinic acid derivative (from *Lecanora sordida*). An aqueous solution of the sodium salt of the mixed half ethyl esters (B.53) was used successfully in the treatment of tuberculous sinuses and ulcers, by topical application.

The second approach was also through a lichen product, diploicin (from *Buellia canescens*). A phenazine derivative (B.283) which had very high activity *in vitro* and was shown to be effective in experimentally infected guinea pigs. A preliminary trial showed that compound to have some effect on leprosy in man.

PROFESSOR W. H. FELDMAN, Mayo Foundation, lectured on the detection and preclinical appraisal of anti-tuberculosis agents. He stressed the limitation of *in vitro* testing indicating the very large number of compounds found in that way to be highly active but inactive in the experimentally infected animal. "With regard to animal testing it must be recognised that experimental tuberculosis in any animal species studied up to the present is not identical with clinical tuberculosis in the

human being. More work has been carried out with mice than all other *in vivo* methods combined; if one accepts its limitations it is probably the best test animal. The value of the guinea pig as an experimental animal is well established and the length of time necessary to conduct a test, while being a drawback with regard to the quantities of drug consumed, allows some idea to be gained of the tolerance of the animal for the drug."

Pathology of Tuberculosis

MR. JOHN FRANCIS discussed the differences in the pathology of tuberculosis in various species of animal and was of the opinion that the course of the disease in the monkey most nearly corresponded to that in man. The use of a medium rich in protein and containing a high concentration of serum was recommended by DR. J. UNGAR as a necessary precaution for *in vitro* work to be any value. DR. A. Q. WELLS suggested that the fundamental difference in tuberculosis in man and in animals was that in the early stages in man tubercle bacilli were taken up by monocytes and it was there that the chemotherapeutic agent must work. Some agent sufficiently insoluble must be sought so that it might be phagocyted by the monocytes and there bring to bear its killing power on the tubercle bacilli.

The present status of antibiotics in tuberculosis was described by DR. GEORGE BROWNLEE, London. Biochemical lesions caused by invasion by a tubercle bacillus were: multiplication of the parasite, chemotaxis of monocytes, inhibition of proteases, hypersensitivity effect, skin allergy and acquired resistance. "Specific chemotherapy is associated with the first and is limited by the emergence of resistant strains of the bacilli. The other lesion concerned with the spread of the disease is the hypersensitivity effect induced by the products of metabolism of virulent pathogens. It is known that this is caused by the protein component which appears to be identical with tuberculin and is harmless to the normal non-sensitised host. Just as histamine, by repeated injection, may be used to desensitise and act as an anti-histamine, so may tuberculin be used to overcome hypersensitivity." It was the lecturer's opinion that the living attenuated bovine bacillus of Calmette (BCG) was more effective against the disease than a heat killed vaccine.

DR. D. A. MADIGAN gave an account of work at Farnborough Hospital employing old tuberculin and bacillary emulsion, under cover of effective chemotherapy, to secure desensitisation in about six weeks. DR. P. SWIFT described a combined therapy in the treatment of tubercular meningitis. It involved the use of streptomycin or dihydrostreptomycin and paraminosalicylic acid (PAS) initially and later Sulphetrone. Better results were obtained than by the use of streptomycin alone.

The Thiosemicarbazones

PROFESSOR DOMAGK, Münster, Westphalia, stated that the three compounds which had been employed in the treatment of tuberculous infections were streptomycin, the thiosemicarbazone TBI (Conteben, thiocetazone) and PAS. All these compounds were active against different types

of tubercle bacilli both *in vitro* and *in vivo*. A combination of thiocetazone and streptomycin was more effective in the treatment of a bovine infection than streptomycin alone. A similar effect was not obtained employing a combination of thiocetazone and PAS or streptomycin and PAS. Toxic side reactions, at first attributed to thiocetazone were found to be due, in part, to dead or damaged bacilli which were broken down in the body. Professor Domagk stated that it was possible to produce fatty degeneration of the liver by injection of dead bacilli.

DR. MARTIN, Manchester, said that he had carried out experiments mainly with mice, with another thiosemicarbazone TBIII which appeared more effective than TBI. DR. NAGLEY, London, thought that TBIII was less toxic in man than thiocetazone.

PRICE CHANGES

(I.R.P.=inclusive retail price)

Evans Medical Supplies, Ltd. (from July 9).

		I.R.P.	
Transfusion solutions:			
Dextrose 5 per cent. in distilled water ...	...	3	1
10 per cent. ...	...	3	3
20 per cent. ...	...	3	3
5 per cent. in normal Saline ...	...	3	1
10 per cent. ...	...	3	3
20 per cent. ...	...	3	3
B.P. 4.3 per cent. w.v. sodium. chlor B.P. 0.18 per cent. w.v. ...	...	3	1
Sodium chloride ...	...	3	1
compound ...	...	3	9
lactate ...	...	4	1
sulphate 4 per cent. ...	...	3	9
Water for injection ...	...	3	5

Each Tax I.R.P.

Streptomycin sulphate: vials of 1 mega unit ... 3 4 5 0

Pharmaceutical Specialities (May & Baker), Ltd. (from August 13).

		<i>I.R.P.</i>	
Ammonium chloride:			
25 x 0.50 gm. tablets ...		1	6
Bisglucol: 10 c.c. ...		3	0
Chlorbismol: 25 c.c. ...		3	6
Myocrisin aqueous:			
1 x 0.20 gm. ampoules		6	0
10 x 0.20 gm. ampoules		55	0
Propamidine cream:			
1-oz. tube ...	...	2	3
Planoform:			
40 lozenges ...	...	2	3
ointment, 1-oz. tube ...	...	3	0
V.A.M.: 4 oz. ...	...	12	6

Doz. Tax I.R.P.

Parke, Davis & Co. Ltd. (from August 20).

Aspirin, phenacetin and codeine tablets (C.T. No. 726)			
25	0 8	3 8	
500	8 4	45 10	
Gluco-Fedrin 1 c.c.	0 5½	2 5½	

Diphtheria prophylactic (P.T.A.P.) 10 c.c.	Nil	8 0	
Hypodermic tablets			
Morphine sulphate 1/12 gr. (No. 56)	Nil	1 9	
(new size)			
Strychnine sulphate 1/30 gr. (No. 73)	Nil	1 0	
(new size)			
(From September 1)			
Caladryl 4 fl. oz.	1 8	4 2	
80 fl. oz.	30 0	75 0	
(Due to change in rate of purchase tax from 33½ to 100 per cent.).			
Keen, Robinson & Co., Ltd. (from August 27).			
Doz. Tax I.R.P.			
Robinsons Patent Groats			
½ lb	1 4		
1 lb.	2 6		
Each Tax I.R.P.			

Bayer Products, Ltd.

Neoselarom 8 oz. 6 9 0 0

Pond's Extract Co., Ltd. (from August 15).

[Corrected note]
talcum powder 3 0

PROPRIETARY ARTICLES TRADE ASSOCIATION

Alterations to Protected List (Part 1)

Product	Doz.	Tax	I.R.P.
Tampax, Ltd.			
Super absorbent Tampax, No. 2, 10's	21 6	Nil	2 4
Wright, Layman & Umney, Ltd.			
Testmal, tube of 10	11 0	33½	1 8
Wright's lysol, 1 gall.	150 0	Nil	18 3

Alterations to Protected List (Part 2)

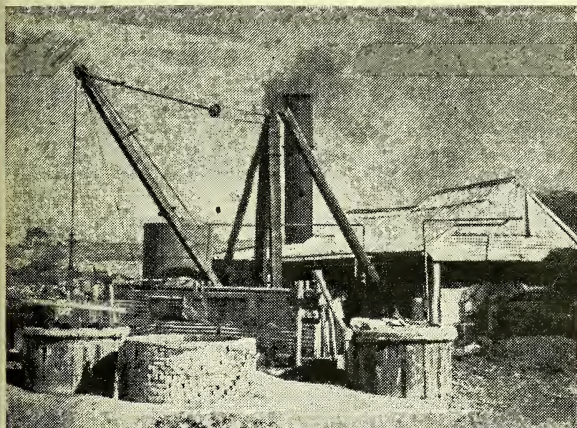
Silvikrin Laboratories, Ltd. [Corrected Note]			
Silvikrin soapless powder shampoo	4 9	33½	0 8
liquid shampoo	10 9	33½	1 6
£4 ros. od. parcels, 4s. 5d. and 10s. per doz.			

PREPARING AUSTRALIAN EUCALYPTUS OIL

By An Australian Correspondent

AUSTRALIA's first export was eucalyptus oil and the "king" of all Australian vegetation is the indigenous blue gum

Goulburn and Queensland; the industry is also of importance in Victoria at Richmond and Inglewood. Varying altitudes



Left: A general view of an Australian eucalyptus oil plant. The crane shown lifts the bales of leaves and shoots from the vats after processing. The galvanised iron house for the boiler (which is fed with dried eucalyptus shoots) is shown on the right of the picture.

Below is shown part of the condensing process. The man is drawing off the oil which, after being condensed, floats on the top of the water in the receptacles shown.

eucalyptus tree. The tree can be transplanted, but away from its native home it loses much of its aroma. On its native soil its leaves will yield up to $3\frac{1}{2}$ lb. of oil from every 100 lb. of leaves, elsewhere the oil yield is less than a quarter of that amount. Britain has been the largest buyer of the oil followed by America, and the oil is also sold to Africa, Canada, China, India, Belgium, East Indies, France, Italy, Japan, Ceylon and the Pacific Islands. The oil is obtained from the leaves and the succulent terminal branches of the trees. In the extraction of the crude oil the leaves and young shoots are placed in a kettle which may hold up to 3,000 lb. Water is added and the whole heated. The heat bursts the oil glands, and the oil discharges into the water later and distils in the steam. The vapours escape through the kettle's spout, and are condensed in a funnel. The water is drawn off and the residual crude oil put into drums and taken to the refinery.

About twenty-four varieties of trees are used for oil distillation. The trees from which industrial oil is secured grow mainly in the Braidwood district and along the South Coast. Medicinal oils are obtained from trees in the Oberon, Wyalong, and Yass districts, whilst the leaves that yield the perfumery oils come from Mittagong,



above sea level affect the nature of the oil.

Recently refineries have been established in Sydney and in Victoria and they are claimed to be the only factories in the world dealing solely with eucalyptus.

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about suppliers of the following items:*

Krimkogel (Irish moss extractive)



The CHEMIST AND DRUGGIST

for RETAILER—WHOLESALE—MANUFACTURER
ESTABLISHED 1859

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Turn of the Tide?

THE overall level of wholesale prices in Great Britain as measured by the Board of Trade index fell during July by 0.9 point from the revised June figure to 320.1 (100 in 1930). This is the first fall in the index since July 1949 when a decline of 2.5 points was registered. From that date the level of prices has continued to rise, the index gaining 90.7 points (the greater part of the increase being added since the outbreak of the Korean fighting). The basic materials price index also fell by 3 per cent. in July to 188.2, the fourth fall in consecutive months. In general, industrial raw materials have fallen by about 14 per cent. from their March peak but they are still 12 per cent. higher than they were twelve months ago. Although sharp rises in the prices of sulphur and pyrites (50 per cent. dearer), lead, zinc, bismuth and other chemicals took place during the month, the effect of the rises on the index was neutralised by the heavy fall in price of such commodities as wool and cotton. Whether the downward movement which has taken four months to reflect itself in wholesale prices will in turn be reflected in retail prices or will be offset by the increasing cost of labour and services remains to be seen. It is, however, certain that the public has limited its buying in certain directions in the hope that prices will come down later in the year. So far as retail sales by chemists are concerned the latest figures available are for the month of June (see p. 233). They show that independent chemists made a good re-

covery after the low level of sales in May, increasing by 11 per cent. over the month and 12 per cent. compared with a year ago. This increase was only 1 point less than that recorded by the "most nearly comparable large-scale organisations," which have tended so far in 1951 to show greater increases over 1950. During the period February-June, total sales by independent chemists were only 2 per cent. higher than during the corresponding period in 1950, while those of the multiples rose by 10 per cent.

A New Field of Chemistry

As was evident at a recent international conference on the peaceful uses of atomic energy (see *C. & D.*, July 28, p. 115), radioactive isotopes are being used increasingly as a research tool to explore wider and wider fields in the medical, biological, agricultural and allied provinces. The preparation of labelled compounds for use in that research is quickly becoming a specialised section of chemistry, and Drs. Cox and Turner on p. 251 commence a short series of articles explaining the principles and methods of preparation so far elaborated. In view of the cost and scarcity of the materials, efficiency of the processes is far more important than in most chemical procedures. It will be seen that labelled compounds used in research fall briefly into three categories: simple intermediate compounds; end products such as amino acids, sugars, hormones; and compounds produced by biological methods such as alkaloids and glycosides. The isotopes for them originate in Britain in the Ministry of Supply's atomic pile. Users of radioisotopes in research who met at Oxford to discuss the supply of radioactively labelled compounds were concerned at the expense involved, and fears were expressed that that alone might result in research never being commenced. Much might be done in reducing the expense by co-operation between the various users if only it ensured the use of labelled by-products or labelled residues such as red blood corpuscles. Suggestions made at that meeting have already been put into effect. An increase in the availability of those products would greatly help research.

Poisons in Consumer Goods

IN addition to discharging its standing responsibilities of reviewing major issues of Government scientific policy the Advisory Council on Scientific Policy in its fourth year (1950-51) turned its attention, as indicated in its annual report recently published, to the problem of toxic substances in consumer goods. While most of the energies of the Council's Committee appointed to investigate that problem, and of the Medical Research Council which co-operated with the Committee, were directed towards toxic substances in foodstuffs, it is gratifying to note that the M.R.C. advised that so far as medicines were concerned no new controls against dangers from toxicity were required. Of the newer substances which are being used in the production of food, insecticides and pesticides were potential sources of danger, and the M.R.C. recommended that "novel substances in food, food processing agents and food contaminants" should be kept under continuous observation. The investigators were of the opinion that an advisory committee of representatives from the Government departments involved should be set up, and that the M.R.C. should have the general responsibility of keeping the problem of toxic substances under review. They wisely agreed that information on new products should be obtained and control be effected by voluntary collaboration with industries. The Advisory Council has made recommendations to the Government on those lines. Supporting a suggestion from the M.R.C. the Advisory Council thinks that it might be in the interest of public health and industry to establish a toxicology laboratory supported by the industries or the trade associations concerned. The laboratory would not be concerned, however, with the chronic effects resulting from frequent contact with poisons although the Council point out that this is a subject on which "much further information and extensive research is needed." The international aspect of the problem of toxic substances in consumer goods is implied by the recommendation that the information should be exchanged with the appropriate authorities in other countries.

The copies of the report "Fourth Annual

Report of the Advisory Council on Scientific Policy 1950-51" are obtainable from H.M. Stationery Office, York House, Kingsway, London, W.C.2, price ninepence each.

A Record Scientific Meeting

A RECORD attendance at the 1951 meeting of the British Association (see p. 244) indicates that those meetings continue to fill a want. The presidential addresses were particularly valuable for setting the specialised subjects to which they were devoted in their right perspective. The President of the Association (the Duke of Edinburgh) assured the audience at its inaugural meeting, that "the beneficent exploitation of scientific knowledge has kept pace with its destructive application." That opinion was paralleled in the chemistry section by that of Sir Cyril Hinshelwood (president), who thought that "the good wrought by drugs, antiseptics and anaesthetics in saving lives and alleviating suffering far outweighs the evil which explosives and poison gases caused in wars." The pharmaceutical side of the chemical industry should take care to maintain its lead referred to in improving working conditions.

A PHARMACIST'S ANTHOLOGY

THE torments to which malingerers were subjected had been reduced to a system and the degrees of torment were as follows: 1. Absolute diet—a cup of tea morning and evening for three days, accompanied by doses of aspirin to produce sweating, irrespective of what the patient complained of. 2. To prevent them from supposing that the army was all beer and skittles, they were given ample doses of quinine in powder. 3. Rinsing of the stomach twice daily with a litre of warm water. 4. The use of the clyster with soapy water and glycerin. 5. Swathing in sheet soaked with cold water. There were dauntless persons who went through all five degrees of torment and had themselves removed in a simple coffin to the military cemetery. There were, however, other who were faint-hearted and who, when they reached the clyster stage, announced that they were quite well and that their only desire was to proceed to the trench with the next draft.—From "*The Good Soldier Schweik*," by Jaroslav Hasek.

SYNTHESIS OF ISOTOPIC COMPOUNDS

For use in Biological and Chemical Research

By J. D. Cox, Ph.D., B.Sc., A.R.C.S. and H. S. Turner, Ph.D., B.Sc., A.R.I.C. (Chemical Research Laboratory, Teddington)

1.—Hydrogen and the Simpler Compounds of Carbon

HYDROGEN has two useful tracer isotopes: the rare stable isotope deuterium and the weak β -emitter tritium ($7\frac{1}{2}$ about twelve years). Both are available as water; deuterium oxide of almost 100 per cent. purity has been readily obtainable for some years but tritium is only just coming into use. Many syntheses of deuterium labelled compounds have been described, but few of tritium. There is no essential difference however, and the syntheses discussed are applicable to both.

The hydrogen atoms of organic compounds differ in their resistance to exchange under biological conditions. Those linked to nitrogen, oxygen, sulphur, etc., are labile, and exchange readily with water; compounds labelled at a labile hydrogen atom can be used only in the study of reactions of that atom. Those linked to carbon atoms which are activated by negative groups, or which participate in tautomeric changes, have a lower lability and are often termed "semi-labile." Compounds thus labelled have had a limited application in biological work, where the reaction investigated is much more rapid than the exchange reaction leading to loss of label (e.g., the biological reduction of coprostanone to coprostanol). Hydrogen atoms linked to carbon in the absence of activating factors are the most stable, but even these can be made to exchange under suitably vigorous treatment. Where the fate of a molecule as a whole is to be studied using tracer hydrogen, the tracer must be stably bound, and may be introduced by addition, exchange and replacement reactions.

Addition Reactions

The introduction of deuterium by addition reactions at unsaturated linkages has been extensively used. Deuterium may be introduced catalytically, or chemically, as in reductions using deuterium iodide, lithium aluminium deuteride, or sodium amalgam and D_2O . Stearic acid has been prepared by catalytic deuteration of oleic and linoleic acids and the first step of a recent synthesis of 11:12-dideuteroprog-

terone and 11:12 dideuterotestosterone involved the catalytic deuteration of Δ^{11} -lithocholenic acid. By reductive amination, or by reduction of their oximes or phenylhydrazones, α -keto-acids are readily converted to deuterated α -amino acids. Occasionally the addition of water to unsaturated systems has been used, e.g., to acetylene to give acetaldehyde, and to carbon suboxide to give malonic acid. Labelled hydrocarbons have been obtained by action of D_2O on suitable metallic carbides, e.g., methane and acetylene from aluminium and calcium carbides respectively. Single deuterium atoms can be introduced by addition of deuterium halides. Such methods often lead to simultaneous introduction of a stable and a labile deuterium atom (as in the reduction of keto groups); the latter can be removed by virtue of its lability.

Exchange Reactions

Under appropriate conditions "stable" hydrogen atoms may be made to undergo exchange. Hydrocarbons may be labelled by a Friedel-Crafts procedure (action of $DCl + AlCl_3$), by heating with D_2SO_4 or catalytically. The hydrogen atoms of benzene exchange with D_2O over nickel-kieselguhr at 200° , and those of methane with deuterium over nickel above 184° . Deuterium is introduced into fatty acids by treating with D_2SO_4 or by action of D_2 at 130° in presence of platinum. Amino acids are also deuterated by D_2SO_4 . It is difficult to introduce deuterium into specific positions by this method. Dilution is inevitable, but can be overcome by successive exchanges with concentrated isotope.

Replacement Reactions

Halogen atoms may conveniently be replaced by deuterium. Methods used include the decomposition of the Grignard compound by D_2O , direct reduction by deuterium and palladium black, reduction by Raney nickel containing deuterium (prepared in D_2O) and reduction by lithium aluminium deuteride. The last reagent can be used in the replacement of certain alcoholic hydroxyl groups by reduction of their tosyl esters (e.g., l-menthyl toluene-p-sulphonate gives an optically

active 3-deutero-trans-p-menthane). Raney nickel containing deuterium has also been used for the replacement of thiol and alkylthiol groups; specifically labelled cholesterol and dethiopenicillin have been pre-

pared by this method. Aromatic primary amino groups may be replaced with deuterium by deamination using hypophosphorous acid and D_2O . When acids $-COOD$, are decarboxylated the label is transferred to the α -carbon atom. Malonic acid, $CD_2(COOD)_2$, has been converted to acetic acid, CD_3COOD , in this way and hexa-deutero benzene has been prepared by heating the calcium salt of mellitic acid with $Ca(OD)_2$.

Where specifically labelled complex compounds are required it is advantageous to prepare simple intermediates by methods such as those described above, and to proceed by conventional synthetic methods.

Biological methods are best applied

where no convenient chemical synthesis exists, e.g., the isolation of labelled glycogen from the liver of rats kept on a D_2O diet and of deuterocoprostanol from the stool of human subjects after ingestion of deu-

COMPOUND	CHIEF METHODS OF PREPARATION AND YIELDS
CO_2	$BaCO_3$ + acid; $BaCO_3$ heated with $PbCl_2$; $KCN + KMnO_4$ (all 100 per cent.)
KCN	$BaCO_3 + NaN_3$ (80 per cent.); $CO_2 + K + NH_3$ (95 per cent.); $CO_2 \rightarrow Ph_3C.CN \rightarrow KCN$ (60 per cent.).
HCN	$Ag_2(CN)_2$ heated in H_2 or H_2S (100 per cent.); C heated in NH_3 (70 per cent.).
CO	CO_2 or $CaCO_3$ heated with Zn (100 per cent.); $H.COONa + H_2SO_4$ (100 per cent.).
$COCl_2$	$CO + Cl_2$ in light (95 per cent.).
$CN.NH_2$	$BaCO_3$ heated with $Ba(NH_2)_2$ (or in NH_3) $\rightarrow BaNCN \rightarrow CN.NH_2$ (95 per cent.)
$CO(NH_2)_2$	$CN.NH_2$ hydrolysed (100 per cent.); $COCl_2 + NH_3$ (90 per cent.); $CO_2 + NH_3$ (80 per cent.); NH_4CNO heated (60 per cent.).
$H.COOH$	KCN hydrolysed (100 per cent.); $KHCO_3$ hydrogenated (98 per cent.); $CO_2 + LiBH_4$ (70 per cent.).
CH_3OH	$CO_2 + LiAlH_4$ (90 per cent.); CO_2 or $H.COOR$ hydrogenated (90 per cent) $R = CH_3$ or $[Cd-Ni]_2$).
$H.CHO$	CH_3OH dehydrogenated (80 per cent.); $CH_3.COOCH_3 \rightarrow CH_3.COOCH_2Cl \rightarrow H.CHO$ (60 per cent.).
CH_3I	$CH_3OH + HI$ or PI_3 (95 per cent.); CH_3Br is prepared similarly.
CH_3NH_2	HCN hydrogenated (97 per cent.); Gabriel reaction with CH_3I (98 per cent.) Curtius degradation of CH_3COOH (90 per cent.).
CH_2N_2	$CH_3NH_2 \rightarrow NH_2.CO.N(NO)CH_3 \rightarrow CH_2N_2$ (70 per cent.).
$CH_3.COOH$	$CH_3MgI + CO_2$ (95 per cent.); $CH_3I \rightarrow CH_3CN \rightarrow CH_3COOH$ (98 per cent.) $C_2H_2 + KOH + [O]$ (80 per cent.).
$CH_3.COOC_2H_5$	$CH_3.COONa$ heated with $(C_2H_5)_2SO_4$ or $(C_2H_5)_3PO_4$ (93 per cent.).
$Cl.CH_2.COOH$	$CH_3.COOH$ chlorinated (90 per cent.); $Br.CH_2.COOH$ (prepared similarly) + $KCN \rightarrow CN.CH_2.COOH$ (75 per cent.).
$PhN_2.CH(CN)_2$	$Cl.CH_2.COOH \rightarrow CN.CH_2.CONH_2 \rightarrow PhN_2.CH(CN)_2$ (10 per cent.).
$CH_2(COOH)_2$	$CN.CH_2.COOH$ hydrolysed (100 per cent.); $CH_3COOC_2H_5 + (COOC_2H_5)_2$ $C_2H_5OOC.CO.CH_2.COOC_2H_5 \rightarrow CH_2(COOCC_2H_5)_2$ (28 per cent.).
$(COOH)_2$	CO_2 heated with K (50 per cent.); $H.COONa$ heated in a vacuum (90 per cent.).
C_2H_2	CO_2 or $BaCO_3$ heated with Ba (or Mg) $\rightarrow MC_2 \rightarrow C_2H_2$ (97 per cent.).
C_2H_4	C_2H_2 reduced with acid $CrCl_2$ solution (100 per cent.).
$(CH_2)_2O$	$C_2H_4 + HOCl$ (or $Cl.CH_2COCl + LiAlH_4$) $\rightarrow HO.(CH_2)_2Cl \rightarrow (CH_2)_2O$ (85 per cent.).
$NH.CO.NH.CH_2.CO$...	$NH_2.CH_2.COOC_2H_5 + KCNO \rightarrow NH_2.CO.NH.CH_2.COOC_2H_5 \rightarrow$ $NH.CO.NH.CH_2.CO.$ (100 per cent.).

tercholestenone. Large dilution is ineffectable, and can best be tolerated using titanium. Labelling is frequently not specific. In all syntheses a confirmatory location of the isotope by degradation is advisable.

Carbon

Three isotopes of carbon have found use in biological tracer work; the positron emitter ^{11}C ($\tau_{1/2}$ 20 minutes) the stable species ^{13}C and the β -emitter ^{14}C ($\tau_{1/2} \sim 5,000$ years). Since ^{14}C became readily available (1946), ^{13}C has been little used; it will be discussed separately. Both ^{13}C and ^{14}C are available in $Ba^{13}CO_3$, which may contain up to 70 atoms per cent. ^{13}C or

atoms per cent. ^{14}C , and in addition in the form of simple intermediates (e.g., NaCN , CH_3OH , H.COONa). The syntheses described apply to both isotopes; the ^{14}C starting material may, however, be diluted $\sim 10^7$ times before accuracy of measurement is reduced while the factor for ^{13}C is only 10^3 . Thus ^{14}C syntheses may be accompanied by considerable dilution with pure inactive carrier (e.g., labelled stereoisomerides may be prepared by dilution of labelled racemates with pure D or L form) whereas with ^{13}C this is rarely permissible.

Carbon isotopes may be introduced into organic compounds by exchange or by chemical or biological synthesis. Exchange reactions (e.g., the isotopic exchange of CO and CO_2 over a hot filament; prepara-

tion of $\text{H.}^{14}\text{COONa}$ by heating HCOONa with $\text{Na}_2^{14}\text{CO}_3$ in aqueous solution) are of very limited application.

Chemical syntheses must start from carbonate or cyanide. Methods are now available for the preparation in high yield of a wide range of simple intermediates from these compounds on scales as low as 10^{-4} mole—the more important intermediates are listed in the table. Compounds with two or more carbon atoms may be labelled in more than one atom, by either the same or different (^{13}C and ^{14}C) isotopes; multiple labelling is often best achieved by mixing the singly labelled compounds. The position of labelling of a multicarbon compound is usually obvious from its method of preparation but in doubtful cases a check by degradation is desirable.

A HISTORIC CAMPAIGN FOR PURE DRUGS

By Laurence Dopson

IN 1851, the year of the Great Exhibition, the medical weekly "Lancet" launched a campaign of exposure of adulteration of drugs and food, a campaign that led to the first modern legislation on this subject. The famous editor of the "Lancet," Dr. Thomas Wakley, had become acquainted with the evils of adulteration much earlier, when working in a chemist's shop, as he told the Select Committee set up to inquire into the matter in 1855.

Early Days of a Crusader

"I think I can refer in a great measure the origin of the Sanitary Commission to an incident connected with my own life at a very early period," he told the committee. "I was articled as a pupil to an apothecary and chemist and druggist at a principal town in Somersetshire." Wakley was tactful not to say that the place was Taunton; there, as a youth of eighteen from Membury, near Axminster, he was apprenticed, after studies at Wiveliscombe Grammar School, to Mr. Inledon.

What used to happen in the shops of chemists and druggists—or some of them—in the second decade of the 19th century was thus detailed by Wakley: "We had a small wholesale department, and the chief business of that department was to send adulterated drugs to a wholesale house in London. . . . I recollect four things distinctly which were sent in large quantities: Verdigris, white precipitate, a preparation called burnt sponge, and anatto. The practice of the house was pe-

culiar; the drugs sold over the counter retail, and for prescriptions, were always of a first-rate quality, but the articles sent to London wholesale were certainly vile prefabrications. The preparation called burnt sponge consisted of 2 lb. of prepared charcoal and 6 oz. of common salt. The verdigris consisted of powdered sulphate of copper and one ounce of acetate of lead dissolved in three ounces of water and then mixed, and the preparation had certainly a very beautiful appearance. . . . There was a preparation also sent as calomel, which consisted of white precipitate of mercury, with an addition of sulphate of lime. . . .

"One of the sons of a surgeon of the town called at our establishment for two ounces of burnt sponge, and he made this remark. . . . 'We shall not want your rubbish long, for we are expecting our burnt sponge from so and so,' mentioning the very firm in London to whom we were sending the fabricated article. I believe the gentleman is dead to whom it was sent, but it was an establishment very near St. Paul's."

Wakley declared that it would be "a great advantage" if chemists and druggists were licensed. "They would not object to it," he said. He also noted improvements in the drug trade brought about by the Pharmaceutical Society.

The "Lancet's" analytical sanitary commission was good journalism and a public service. Drugs and compounds were purchased at various shops in

London and analysed. Dr. A. H. Hassall was in charge of the investigations, and where chemical analyses were required he was assisted by Dr. Henry Letheby, then lecturer at the London Hospital medical college, working in a chemical laboratory installed at the top of the "Lancet" offices. For the first three months no names were published, but thereafter the name and address of the shop where the article was bought, together with the result of the analysis, appeared in the columns of the "Lancet." That meant exposure in all too many cases.

Hamlet without the Prince?

Although at first the reports were chiefly concerned with the adulteration of foods, a leading article in 1853 stated: "Had reports of an investigation of drugs and medicinal preparations been omitted from the record of an analytical sanitary commission, undertaken by a medical journal, it would, indeed, have resembled the performance of 'Hamlet' with the omission of the principal character. Constant purity and uniformity of strength under the proper titles of medicines are really conditions of paramount necessity."

Drugs investigated included laudanum, 3ij, bought at Apothecaries' Hall, cost 2s. 2d. A sample of the same item purchased for 1s. 2d. at "Mr. Squire's, 277 Oxford Street," contained 1 gr. opium in 34.5 minims—little more than half what the College of Physicians intended. On the other hand a sample purchased at Reece's Medical Hall, Piccadilly, contained 1 gr. in 4.5 minims; "it contains upwards of four times the quantity of residuum that it ought, and does not possess that freedom from gum that is noticed in well prepared laudanum." "If these analyses have established one fact more fully than another, it is that the directions in the Pharmacopoeia have failed to produce a consistently uniform result." The commissioners added: "We cannot conclude this article without again calling attention to the prices paid for the samples—the higher price having been frequently paid for an inferior preparation."

Out of seventeen samples of powdered scammony, purchased from various chemists and druggists, one was genuine.

"That the drug grinders are in the habit of practising many adulterations with various articles of the materia medica is a matter of notoriety amongst chemists and druggists and many members of the medical profession, and various are the state-

ments related to the practices of which they have recourse," says another report (on jalap); "thus, it is said to be a common thing to send a certain quantity of an article to be ground, with a request that it may be returned of a weight greatly exceeding that of the article sent. For this statement . . . there is good foundation."

Ipecacuanha, "one of the most important medicines in the whole materia medica," was proved to be adulterated "to such an extent as to render its effects when administered most unsatisfactory." A sample supplied to a hospital was adulterated with a large quantity of chalk; another batch, purchased in the Minorities, contained 14 per cent. tartar emetic. It followed, as the commissioners pointed out, that other drugs compounded from ipecacuanha were similarly adulterated, pulv. ipecac. co., pil. conii co., pil. ipecac. c. opio, and c. scilla being mentioned.

Among foods, the adulterations revealed were as bad or worse. It was indeed fortunate that one chemist's apprentice had a conscience that was sufficiently moved to cause him to determine to reform the position and so to establish the "Lancet" analytical sanitary commission of 1851.

EXECUTIVE COUNCILS' ASSOCIATION

A MEETING of the Management Committee of the Executive Councils' Association for England was held in London recently.

A resolution submitted by the Northampton Pharmaceutical Committee that "County chemists are already working longer hours than the town chemists and should be paid full rota," was referred to the appropriate professional negotiating body. The Derby Executive Council called attention to the fact that some National Health Service patients retained oxygen cylinders and fittings after they had ceased to require them. The Council suggested that (i) where the Council had been notified of such retentions for more than fourteen days, periodic inquiries from either the doctor or the patient should be made (ii) legislation should be introduced to enable a returnable deposit on cylinders and fittings to be paid to the chemist. The Management Committee, however, considered that each chemist should be responsible for his own cylinders and fittings and that payment of a deposit was not practicable as many patients would be unable to afford it.

Following his recent visit to Southend (*C. & D.*, August 11, p. 187)
OUR INTERVIEWER VISITS ASHFORD, KENT, TO FIND OUT ON THE SPOT



what chemists are thinking

ASHFORD, Kent, is an urban district and market town fourteen miles south-west of Canterbury, with engineering shops and brickfields as local industries. It had a population in 1931 of around 15,000, and has twelve pharmacies.

MR. P. MARKS, M.P.S., whose pharmacy at 229 Beaver Road is located in an outlying area some distance from the town, is open each weekday till 7 p.m. for dispensing. He was disappointed with the National Health Service, not only for financial reasons but because he felt he had lost a good deal of the personal side of his activities as a pharmacist. "I used to enjoy myself as a pharmacist and as a man under private dispensing," said Mr. Marks. "Now I feel little more than a drudge. The disappointing part of the N.H.S. scheme, which may not have been foreseen during its organisation, but should have been guarded against, is its abuse. With everybody playing the game the scheme would have been a pleasure to take part in. There would have been no 'Give us a ticket, doc., for . . .', and for the chemist 'Make this up.'" Mr. Marks was very satisfied with the work of the National Pharmaceutical Union, but

wanted to know how the Union stood with the multiples in the event of a withdrawal of dispensing services being contemplated. Enlightenment on that point and, possibly, a referendum to all contractors, would be useful to all concerned. "In every way possible I support the Chemists Federation and would like to see the movement much stronger."

Service Outside the Town

MR. JOHN BROCKLEHURST, M.P.S., Willesborough, whose pharmacy is in a sparsely populated area outside the town, said the location of his business put him outside the rota area, and under an arrangement with the Executive Committee he was open until 6.30 p.m. each evening for late dispensing, but found that, to provide a service that would satisfy the public, he had to keep open till 7.45 p.m. and sometimes later, dealing with prescriptions requiring dispensing the same evening. He thought he should be paid for the whole of the necessary late opening, but so far his request to the Executive Council had not been approved. Mr. Brocklehurst was frank in his views on the Chemists Federation. Up to two years

ago he had displayed in his shop only C.F. goods. Now he had to display other goods to keep up with his competitors, though he did not like doing so. "So far as the price-regulation of branded goods is concerned, I still hope the threat of a breakdown may be avoided."

"New Blood" Wanted

MR. T. J. CHAMBERLAIN, M.P.S. (manager of Boots, Ltd., High Street, Ashford), who made it clear that he was expressing his own personal views, considered that the introduction of new blood on the Council would be a good thing, however unlikely to happen under the present electoral system. A complete blood transfusion, such as territorial representation would involve, might prove something of a hazard when it took place, but eventually he thought the patient would be much healthier.

Calculating Ministry's Debt

MR. J. PENRYN HILL, M.P.S. (Superintendent, Pharmacy Department, Ashford Co-operative Society), who also made it clear that the opinions he expresses were personal, and not necessarily those of his own or any other co-operative organisation, said "One of my difficulties under the National Health Service is that I have from time to time to calculate at the request of our accounts department, how much the Ministry owe us and the heavy and increasing lag in final settlements makes the job very complex." The cut in oncost from 33 to 16 per cent. had in six months made a difference of no less than £500 to one of his branches. On present expenses the minimum oncost should be 25 per cent. and for expensive products that are seldom called for but must be kept in stock, at least 30 per cent. Referring to the Pharmaceutical Society, Mr. Hill said he did not wish to bring in the personal element but he would like to know, like many other members, why the Society had two secretaries. On education Mr. Hill said, "B.Pharm. are not necessary in, nor suitably trained for, retail shops; neither would they want to come behind the counter. Their place is the laboratory and so on but the well-trained M.P.S.-cum-business man is the thing for retail."

Advertising Dispensing

MR. G. E. SHAW, M.P.S., and MRS. A. N. SHAW, M.P.S., 42 High Street, Ashford, considered that the use of the words "Dispensing Chemists" should be per-

mitted in advertisements, provided it was not in a larger or bolder type than the name of the chemist.

"I generally vote at the Council elections," said Mr. Shaw, "but I seldom know any of the candidates from a bar of soap; I would much prefer the system of territorial representation." If the negotiations over remuneration broke down said Mr. Shaw, it was doubtful whether the independent retailers locally could afford to withdraw their services as they had four company chemists shops in the town which, with additional help, might be able to provide some sort of service in the event of an organised withdrawal by independent contractors.

Mr. Shaw asked whether the makers of new ethical products could not be induced possibly through the Association of British Pharmaceutical Industry to give all the details of each new product in their advertisements in the trade journals, the details to be given in a standard form and size that would enable retailers to cut out the information and paste it on index cards. He did not think retailers should be called upon to purchase that information from the Society and he disliked mutilating the editorial pages of the *C. & D.* where they were published. On the subject of economising on N.H.S. costs he thought it might be useful if the authorities were to advise doctors, say, once a quarter, of the average cost of the prescriptions they had given their patients. He thought it reasonable to ask doctors to help in that way to keep down costs without interfering with their right of freedom to prescribe what was best in the interests of the patient. Mrs. Shaw said she was in favour of British pharmacy aiming educationally at being like the best-class pharmacies on the Continent. "If we could afford to pay for higher education, it should be able to afford to be more ethical," she said. Under present circumstances it might be a "far cry" and it was admitted that with the increase in pack ethical proprietaries, which were commonly prescribed by the doctors, there was actually less need for the higher education of the future retailer. They had had unfortunate experiences of "higher educated" pharmacists in their business and there was no doubt that, for some time ahead, the chemist and druggist who was well trained in business as well as in the practice of pharmacy, was to be preferred to the shop and for contact with the public.

Nevertheless, the ethical pharmacist and pharmacy of the Continent is my ideal." Mr. Shaw pointed out that the proposal to outlaw price maintenance would make higher education impracticable.

[Reprints of "Guide to New Medicaments" are sent to C. & D. subscribers free on application.—EDITOR.]

Health Centres "Inconvenient"

MR. A. P. HARTMAN, M.P.S., 61 Beaver Road, Ashford. Mr. Hartman's pharmacy is in an outlying district and is kept open all 7 p.m. each weekday to cater for the needs of the locality in late dispensing. "I am sure the public would not like health centres," said Mr. Hartman. "They would be inconvenient to the majority and would mean more herding and queuing and nothing like the service they are at present receiving." Mr. Hartman pointed out that it was the East Kent

Branch that sent to the Council the resolution of territorial representation. That system, he said, would bring with it personal contact with candidates and the elected member; it would, he believed, increase the vote and it would certainly be better for pharmacy and pharmacists as a whole. Mr. Hartman said it should be emphasised that what is needed more than ever today is "lots of well-trained pharmacists for retail, with not too many specialists." Despite the present unsatisfactory conditions under which they were carrying out the dispensing service he would be sorry to revert to private dispensing. "For one thing, we are serving the public, and we are doing the job for which we were trained and have at last been recognised for this purpose. Finally, in this area at least, we have to remember that the doctors were in the habit of doing much of their own dispensing prior to the N.H.S."

CORRESPONDENCE

Birdsgrove House Gifts

SIR,—It is with regret that I read of the Pharmaceutical Society's decision (see *C. & D.*, August 11, p. 182), to end gifts in kind to Birdsgrove House, and to replace it by monetary gifts to a common fund. Surely, people will work harder to raise money if they have the definite aim in view of providing a particular item, than if the result of their efforts becomes just a part of the general fund to obtain what the Society think is necessary. If this is the new scheme, then I for one, and I am sure there will be many like myself, will lack the incentive to do greater things for "our house."

STIRLINGS.

Calls for Unity

SIR,—After publication of the debate in the House of Commons on the £4,000,000 owing to chemists, a local doctor told me in no uncertain language what he thought about us and suggested that if we were sufficiently united we could at least be saving interest on this money. This brought me back to the resolution moved by Mr. David of Swansea, at the Pharmaceutical Society's annual meeting for the formation of a 100 per cent. membership association to protect our general interests. In spite of the vague doubts expressed from the platform, I am not aware of anything in the Charter that prevents the setting up of such an association, and I think that members (shareholders) could at an annual

meeting direct that a part of their moneys be expended for their mutual protection and benefit, and under a separate department. I hope this matter comes up again at the next annual meeting and that members are more alive to the benefits to be gained. In this world of shortages the apathetic don't receive the cream.

Stoke-on-Trent.

J. S. HAYWOOD.

SIR,—Some of the views expressed by Dr. D. McCall for the unification of Pharmacy, in his address to the Scottish Department (see *C. & D.*, July 14, p. 45), are merely a reiteration of the original ideas of the Association of Glasgow Pharmacists on its inception. We envisage local associations of all pharmacists in every area in Scotland, with a co-ordinating body drawn from these associations. With the object of forming such a unified body we would appeal to similar associations of pharmacists throughout Scotland to discuss this project and communicate their views to us. This would assist our Committee to make preliminary arrangements to call a meeting of representatives from all areas to discuss the matter on a national scale. In areas which do not have such associations we would appeal to pharmacists who are imbued with the ideas expressed above, to form an association with a view to attaining unity, and to communicate with the undersigned.

ASSOCIATION OF

GLASGOW PHARMACISTS,

Glasgow.

David R. Brodie, *Secretary*.

DEVELOPMENTS IN TRANSPORT CHARGES

By Graham Saville

FOLLOWING increase in the fuel tax imposed by the 1951 Budget, the Road Haulage Executive recently announced increases in rates. To bring those increases into effect, the Executive adopted a change from the previous method. Instead of a flat percentage increase on all charges, the present increases are of 2 per cent. for journeys of up to forty miles and 3 per cent. for journeys beyond that distance. There are a number of technical explanations for the difference, but many traders will feel that it can be related to some extent to the increased competition that exists for short-distance traffic. Hauliers operating outside the British Road Services have been faced with similar increased costs, and the Road Haulage Executive recommended to its members that they should increase their rates by 2½ per cent.

Railway Increases

The Docks and Inland Waterways Executive and the Railway Executive have also announced increased charges. For railway goods transport the increase amounts to 10 per cent., following increases in basic rail charges of 5 per cent., 55 per cent. and 16½ per cent. There are, however, a number of services provided by the railways to which the 10 per cent. increase does not apply. They include:—Commission and forwarding charges; Customs clearing charges and entry duty; internal user charges on railway-owned wagons and sheets; traffic stored on other than tonnage terms (merchandise and coal class); transshipping contents of one wagon to another; wagon standage charges; and demurrage on railway-owned wagons, containers and sheets. (The demurrage charges that are excluded from the present increases do not normally vary with ordinary rail charge increases.)

Increases have been applied for the use of specially constructed vehicles for articles of exceptional bulk in proportion to weight; in cartage charges raised separately on traffic carried at station to station rates included in special quotations; for outboundary cartage; in container uplifting and drop charges; for country lorry service, use of cranes by traders for loading and unloading; for detention of road vehicles, hire of hampers, loading and unloading, branding or altering marks on packages, railhead distribution; samples

taken from consignments at request; siding rent on private owners' wagons; town cartage; and weighing.

The premiums that operated for small parcels prior to the present increase ranged from sevenpence to 1s. 6d. per consignment. The new premiums are:—On rates not exceeding 20s. per ton, 8d.; 40s. per ton, 10d.; 60s., 1s.; 100s., 1s. 2d.; 140s., 1s. 3d.; 200s., 1s. 6d.; exceeding 200s. per ton, 1s. 8d. As the premiums imposed on small parcels can have a considerable effect on the overall level of traders' transport costs, consignments coming within the range of that scale should be watched. It is intended to impose the small-parcels premiums on all consignments of under one ton, and that should cause many pharmaceutical firms to review their dispatching arrangements. The increases in rates have also disturbed the present split-delivery charges.

Returned-Empties

The scales of most concern to pharmaceutical businesses are E (principally), F, G and H. Scale E covers all returned empties not included in any other class. The following table shows the levels at present operative:

	per cwt.
Not exceeding 25 miles ...	7d.
Exceeding 50 but not exceeding 100 miles ...	2s. 1d.
Exceeding 200 but not exceeding 250 miles ...	4s. 7d.
Exceeding 350 but not exceeding 400 miles ...	7s. 3d.
Exceeding 600 miles ...	11s. 8d.

All returned-empty scales are on a station-to-station basis, and the cartage charge for scale E is 4d. per cwt. at sending or destination station other than London, 6d. per cwt. in London. There is a minimum charge per consignment levied on returned empties, and in respect of class E this is now 8d.

Many other items of transport charge have been effected by the increase, including agreed charges and commuted claim arrangements. The percentage value under commuted claims arrangements may be disturbed by other increases, and the opportunity should be taken of checking whether terms under commuted claims settlements are such as to repay for losses sustained.

In the field of passenger fares a drastic charges schemes has been lodged.

MISCELLANEOUS INQUIRIES

Dutch Arsenic.—*S.M.L.*—A formula for Dutch arsenic is:—crystallised sodium arsenate ($7H_2O$) one part, water six hundred parts. Under medical supervision the dose is one drop increased over a long period to eight drops.

Sterile PAS Jelly.—*H. D. K.*—A sterile jelly of *p*-aminosalicylic acid can be made to the following formula:—

Sodium <i>p</i> -aminosalicylate	...	20.0
Tragacanth	...	4.0
Sodium metabisulphite	...	0.1
Glycerin	...	5.0
Water	...	to 100

Sterilisation technique is used.

Liver Fluke.—*K. H. M.*—Information on the life history of the liver fluke is given together with details of preventive measures against and treatment of liver rot in sheep in Animal Health Leaflet No. 6 (superseding Advisory Leaflet No. 310) published on behalf of the Ministry of Agriculture and Fisheries by H.M. Stationery Office, York House, Kingsway, London, W.C.2 (price 1d.).

Penicillin Cream Ophthalmic.—*D. P. A.*—A suitable penicillin cream for use in the eyes may be made, using aseptic technique, to the following formula:—

Penicillin	.....	1,000 units
Emulsifying wax	.....	7
Hard paraffin	.....	5
Liquid paraffin	.....	41
Chlorocresol	.....	0.05
Water	.....	to 100

Coal Tar Shampoos.—*J.A.N.*—Coal tar shampoo may be made by adding a small proportion of solution of coal tar and pine oil to a good liquid shampoo. The following formula would serve as a base:

Potassium carbonate	.....	12 oz.
Water	.....	2 gall.
Industrial spirit	.....	3 gall.
Dry extract of quassia	.....	1 oz.
Saponin	.....	2 dr.

The formula must be submitted to the Board of Customs and Excise authorities.

Cleaning of Machinery by Women.—

A. F.—Women and young persons are not permitted to clean whilst in motion any part of a "prime mover," any transmission machinery, or any part of any machine if to do so would expose them to risk of

injury from any moving part of that machine or of any adjacent machine. Cleaning by women and young persons of other types of machinery is permissible provided they are not exposed to danger from any moving part.

Silicones in Polishes.—*A. M. B.*—Silicones incorporated in car polishes are claimed to speed application of the polish, and to impart to it a high dirt and water repellency, and to make the finished surface sparkling, durable and easily washed. A wax-free cleaner and polish can be formulated by combining silicone oil, abrasive, and solvent. Carnauba wax (about 6 per cent.) can be incorporated if desired. The hardness of the wax is not reduced by the silicone. In cleaner polishes 4-5 per cent. of silicone is usually incorporated.

Stomach Worms in Cattle.—*G.R.*—Animals become infected with stomach worms as a result of grazing in pasture contaminated with the parasites. The eggs are produced within the animals stomach and pass out with the dung. Crowded grazing should be avoided as that results in heavily infected pasture. For treatment, the Ministry of Agriculture and Fisheries recommends (in Animal Health Leaflet No. 42) the use of phenothiazine given as a drench. The following dosage is suggested:—

Calves 6-9 months	.....	$\frac{1}{2}$ oz.
Calves 9-12 months	.....	$\frac{3}{4}$ oz.
Yearlings	.....	1 oz.
2-year-olds	.....	1 $\frac{1}{2}$ oz.

Importation of Rooted Plants.—*S. M.*—Normally every consignment of botanical specimens and other plants landed in Britain from abroad must be accompanied by a Ministry of Agriculture and Fisheries certificate as prescribed by the Importation of Plants Orders, 1947 and 1949. The Ministry is, however, prepared to issue an import licence, unaccompanied by the prescribed certificate, to a person wishing to bring back from abroad rooted wild plants for planting in his private garden, subject to a declaration being made that the plants are wild and brought in for the purpose indicated. The necessary declaration form may be obtained from Horticulture Branch I of the Ministry, 28 Chester Terrace, Regent's Park, London, N.W.1.

TRADE REPORT

Spot quotations for pharmaceutical chemicals represent the prices for wholesale quantities of standard quality. Prices of crude drugs and essential oils vary as to brand or grade.

London, August 22

ALL markets have continued quiet during the past week. IODIDES are in limited supply owing to restrictions on the supply of crude iodine; prices remain unchanged as do all other PHARMACEUTICAL and FINE CHEMICALS. The quiet tone in the CRUDE DRUGS market of the past few weeks has generally prevailed though there has been more inquiry for a very limited number of commodities. More business in new-crop Portuguese ERGOT is reported and prices now quoted for prompt shipment are about 44s. per lb., c.i.f. A few offers of Curaçao ALOES have been received in the region of 485s. per cwt.; Prime Cape offers remain at 235s., c.i.f. Prices for new-crop Belgian CHAMOMILE FLOWERS are awaited; they are expected to be about 4s. 10d. per lb., c.i.f., for No. 1 flowers. Chinese and Brazilian MENTHOL remain quiet and prices have fallen to 82s. 6d. per lb., duty paid. GUM ACACIA has fallen by 2s. 6d. per cwt., Kordofan cleaned sorts are now 130s. per cwt. TRAGACANTH remains unchanged. An announcement during the week by the Ministry of Food that a reduction in the rates of allocation of sugar to most manufacturers would take place from November 4, has led to more inquiry for HONEY. Australian is in extremely short supply and it is generally believed that honey from all sources will be very difficult to obtain before the winter is over. There were no major changes in the ESSENTIAL and EXPRESSED OILS. Spot supplies of BAY, BERGAMOT, English-distilled CARDAMOMS and EUCALYPTUS are hard to find in quantity. Quotations for HYDNOCARPUS on the spot and forward have risen.

U.S. Drug and Chemical Report

New York, August 17

A GOOD demand has been shown for SALICYLATES, ANTIBIOTICS and VITAMIN products. TARTRATES continue to be featured by a general strong tone. A major supplier of PENICILLIN is reported to have reduced prices of labelled material recently but bulk prices are holding steady. Higher prices have been quoted by some makers of CREAM OF TARTAR and TARTARIC ACID to meet the rising raw material costs. THYMOL continues scarce while odd lots of SANTONIN are commanding high prices. There has been a lack of consumer demand for CRUDE DRUGS but prices have generally remained unchanged. CASCARA SAGRADA has eased somewhat because of new-crop influences, but CARNAUBA WAX shows a firmer tone for the first time in many weeks. MENTHOL remains at the

lowest level of the year and demand is reported as quiet. Lower prices for MERCURY has failed to bring about any improvement in buying. Trading in ESSENTIAL OILS continues very quiet and little relief is expected for the next few weeks.

Exchange Rates on London

Rates at the opening on Wednesday morning were:—

Centre	Quoted	Rate
*Alexandria ...	Piastres to £	97½—97½
Amsterdam ...	Florins to £	10.63—10.65
*Bombay ...	Shillings to rupee	1/5½—1/6½
Brussels ...	Francs to £	139.90—140.10
Copenhagen ...	Kroner to £	19.32—19.36
Dutch West Indies	Florins to £	5.27½—5.29
*Hong Kong ...	Shillings to \$	1/2½—1/3½
*Israel ...	£1 to £	99½—100½
*Karachi ...	Shillings to rupee	2/1½—2/1½
Lisbon ...	Escudos to £	80.35—80.65
*Montreal T.T. ...	Dollars to £	2.95½—2.96
New York T.T. ...	Dollars to £	2.79½—2.80½
New York M.T. ...	Dollars to £	2.79½—2.80½
Oslo ...	Kronor to £	19.98—20.02
Paris ...	Francs to £	979—981
*Singapore ...	Shillings to \$	2/4½—2/4½
Stockholm ...	Kronor to £	14.47—14.50
*Teheran ...	Rials to £	89.40—91.00
Zurich ...	Francs to £	12.23—12.26

*Free market rates; remainder Bank of England

Pharmaceutical Chemicals

ACETANILIDE.—1-cwt. lots are 2s. 11d. per lb. for crystals and 3s. per lb. for powder.

BENZYL BENZOATE. — Makers offer B.I. grade at from 4s. 3d. to 5s. per lb.

BISMUTH SALTS.—Scheduled prices (per lb.) are as follows:—

	1-cwt.	28-lb.	7-lb.
	s. d.	s. d.	s. d.
CARBONATE ...	31 8	31 11	36 1
SALICYLATE ...	26 0	26 3	29 8
SUBGALLATE ...	27 9	26 2	29 7
SUBNITRATE ...	25 11	28 0	31 8

CALCIFEROL. — Price of 1-kilo lots (25-gm. ampoules) is now 5s. 9d. per gr.

CARMINE.—Higher. Prices are from 85s. to 90s. per lb. according to quantity.

CALCIUM SUCCINATE. — Quotations are from 10s. 6d. to 12s. 6d. per lb., as to quantity. SUCCINIC ACID is from 10s. 3d. to 12s. 3d. per lb.

CARBON TETRACHLORIDE.—In 1-2 carbon lots, B.P. grade is £115 per ton. TECHNICAL, in 40-gall. drums, in less than 1-ton lots, is £66 per ton; 1 ton and under, £64 10s.; 2 tons and under 4 tons, £64; 4 tons and upwards, £63.

CHALK.—Price of cones per cwt. is 40s. (in 7-lb. boxes, 45s.).

GLYCERIN.—Rates at present for chemically pure (B.P.) are as follows:—

	Under 1 cwt.	1 cwt. and under 5 cwt.	5 cwt. and under 1 ton.	1 ton and under 5 ton.	5 t or an under 25 tons
Minimum deliveries off contract of . . .	—	1 cwt.	1 cwt.	5 cwt.	10 cwt.
Per Cwt. Tins	s. d.	s. d.	s. d.	s. d.	s. d.
14-lb.	312 0	307 6	303 6	299 0	297 6
28-lb.	310 0	305 6	301 6	297 0	295 6
56-lb.	306 0	301 6	297 6	293 0	291 6
DRUMS					
1-cwt.	—	289 0	285 0	280 6	279 0
2½-cwt.	—	286 6	283 0	278 6	277 0
5-cwt.	—	—	282 6	278 0	276 6
10-cwt.	—	—	281 6	277 6	276 0

55 tons and upwards (minimum delivery off contract of 2 tons), 14-lb. tins, 296s. 6d.; 28-lb., 294s. 6d.; 56-lb., 290s. 6d.; 1-cwt. drums, 278s.; 2½-cwt., 276s.; 5-cwt., 275s. 6d.; 10-cwt., 275s. Extra charges are made for smaller deliveries ex contract of from 6d. to 2s. Tins and cases free, glass packages and iron drums charged extra and returnable. Drums will be credited in full only if returned carriage forward in good condition within four months of date of invoice; if retained beyond six months their intrinsic value only will be credited, which will not in any case exceed two-thirds of the invoice price. Terms: 2½ per cent. monthly account, afterwards net. (Refined pale straw industrial grade is 5s. per cwt., less than above).

HYDROQUINONE.—In short supply, 1-cwt. lots are 10s. 9d. per lb.; 28-lb., 11s. 3d.; 4-lb., 11s. 6d.; 7-lb., 11s. 9d.

HYOSCINE HYDROBROMIDE. — Quotations are from 90s. to 95s. per oz., according to quantity, for British material.

HYPOPHOSPHITES. — Prices per lb. are unchanged as follows:—

SALT	7 lb.	28 lb.	1 cwt.
	s. d.	s. d.	s. d.
AMMONIUM ...	10 10	10 5	10 0
BARIUM ...	7 1	6 8	6 3
CALCIUM ...	5 5	5 0	4 7
IRON ...	10 10	10 5	10 0
MAGNESIUM ...	8 5	8 0	7 7
MANGANESE ...	9 2	8 9	8 4
POTASSIUM ...	7 5	7 0	6 7
SODIUM ...	6 1	5 8	5 3

IODINE PREPARATIONS. — Unchanged. Rates (per lb.) are as follows:—RESUBLIMED IODINE, 1 cwt., 20s. 10d.; 28 lb., 11s. 4d.; 7 lb., 25s. 2d. IODOFORM POWDER, 1 cwt., 24s. 9d. 28 lb., 25s. 3d.; 7 lb., 29s. 8d. (CRYSTAL, 2s. 8d. per lb. more).

POTASSIUM IODIDE, 1 cwt., 17s. 11d.; 28 lb., 18s. 5d.; 7 lb., 21s. 10d. SODIUM IODIDE, 1 cwt., 19s. 2d.; 28 lb., 19s. 8d.; 7 lb., 23s. 3d.

MAGNESIUM OXIDE. — Rates for LIGHT, B.P., are as follows:—5-cwt. lots, 3s. 2d.; 1-cwt., 3s. 3d. per lb., in bulk; 28-lb. in tins (free), 5s. 3d. per lb. In bulk packing, HEAVY, B.P., is 5s. 1d. per lb.

METOL.—Firm. 1-cwt. lots are 22s. per lb.; 28-lb., 23s.; 14-lb., 25s.; 7-lb., 26s.

OLEIC ACID.—Prices for B.P. are from 1s. 7d. to 2s. per lb. and technical from 1s. 5d. to 1s. 10d. per lb.

OPIATES. — Home-trade rates (per oz.) for quantities of 5 oz. and upwards are as follows:—CODEINE. — Alkaloid, hydrobromide and iodide, 58s. 6d.; hydrochloride and sulphate, 51s.; phosphate, 44s. MORPHINE. — Alkaloid bimeconate, and tartrate, 62s. 6d.; hydrochloride, acetate, hydrobromide and sulphate, 52s. DIAMORPHINE. — Alkaloid, 62s.; hydrochloride, 56s. 6d. ETHYLMORPHINE. — Alkaloid, 65s. 6d.; hydrochloride, 55s. 6d.

OXALIC ACID.—In quantities of 1-ton and less than 2 tons, spot material for the home trade is £133 10s. per ton, in 5-cwt. casks; 10 cwt.-1 ton, £138 10s. per ton; 5 cwt.-10 cwt., £143 10s. In 1-cwt. kegs, prices are £4 per ton more; quantities of less than 5-cwt., £162 10s. per ton. Packages free; delivered in U.K.

QUININE. — Makers' rates (per oz.) to home-trade distributors are given below:—additional charges must be added for repacking, etc. ALKALOID, from 5s. to 5s. 6d.; ACETYSALICYLATE, 6s. 3d. to 6s. 9d.; BISULPHATE, 3s. 7d. to 4s. 1d. DIHYDROBROMIDE and DIHYDROCHLORIDE, 4s. 11d. to 5s. 5d.; FORMATE, 5s. 9d. to 6s. 3d.; GLYCEROPHOSPHATE, and PHOSPHATE, 5s. 5d. to 5s. 11d.; HYDROBROMIDE and HYDROCHLORIDE, 4s. 6d. to 5s.; SALICYLATE, 4s. 8d. to 5s. 2d.; SULPHATE, 4s. to 4s. 6d.; QUININE and UREA HYDROCHLORIDE is quoted from 4s. 10d. to 5s. 4d.

RESORCIN.—Prices are from 12s. 6d. per lb. MONOACETATE is from 16s. to 17s. 6d.

ROCHELLE SALT.—Rates (per cwt.) for powder or granulated material are: 5-cwt. lots, 200s.; 1-cwt., 202s. 6d. Smaller quantities are from 2s. 3d. to 2s. 6d. per lb. SEIDLITZ POWDER, ordinary strength, is 154s. 3d. per cwt. in 5-cwt. lots, 1-cwt., 156s. 3d.; smalls, from 1s. 10d. to 2s. 1d. per lb. Extra strong is 166s. 9d. and 168s. 6d. (smalls, 1s. 11d. to 2s. 2d.) for similar quantities, and double strength, 173s. 9d. to 176s. per cwt. (2s. to 2s. 3d. per lb.).

SALOL.—In 1-cwt. lots, 9s. per lb.; 28-lb., 10s. 6d.

STILBESTROL.—Quotations are from 1s. to 1s. 4d. per gm. as to quantity.

Crude Drugs

ACONITE.—Spanish *napellus* is nominally 3s. 9d. per lb., duty paid.

ALOES.—Prime Cape on the spot is quoted at from 255s. to 275s. per cwt.; forward offers at about 235s., c.i.f., for prompt shipment. Offers of Curaçao received from source have been in the region of 485s. per cwt.

ANTIMONY.—English, 99.6 per cent., £402 10s.; 99 per cent., £390 per ton.

ARECA NUTS.—Spot quotations are 50s. per cwt. for Ceylon.

BENZOIN.—Quiet. No. 1 Sumatra block on the spot is quoted at £28 per cwt.; for shipment, £24 15s., c.i.f. Siam free almonds (medium) are offered at 37s. 6d. per lb., ex warehouse.

BISMUTH.—In minimum 5-cwt. lots metal is now 25s. 9d. per lb.

CAMPHOR.—Chinese (B.P.) powder on the spot is from 5s. 4d. per lb., in bond (5s. 10d., duty paid); $\frac{1}{4}$ -oz. tablets on the spot are from 6s. 9d. per lb., duty paid.

CARDAMOMS.—New-crop Aleppy greens, for October-November shipment, is quoted from the origin at 18s. 6d. per lb., c.i.f.; for November-December, 17s. 9d. per lb., c.i.f. Aleppy seeds, No. 1, on spot, 32s. 6d.

CASCARA SAGRADA.—New-peel American bark for shipment is quoted at 280s. per cwt., c.i.f. 1950 bark on the spot is 325s. per cwt., duty paid.

CHAMOMILE FLOWERS.—New-crop prices for Belgian are awaited, market expected to open at about 4s. 10d. per lb., c.i.f., for No. 1.

CHERRY BARK.—Thin cut natural is quoted at 2s. 3d. and rossed at 2s. 6d. per lb., duty paid, ex warehouse London.

CHILLIES.—Sierra Leone on the spot are quoted at 270s. per cwt.; for shipment, 260s., c.i.f.; East African (Mombasa), 335s., ex warehouse; for shipment, 285s., c.i.f.

CINCHONA.—*Succirubra* chips of East and West African origin testing over 6 per cent. are quoted at 2s. to 5s. 6d. per lb., according to colour and analysis.

CINNAMON.—For shipment (c.i.f.): OOOO, 2s. 11d.; OOO, 2s. 10d.; OO, 2s. 9d.; O, 2s. 8d.; firsts, 1s. 10d.; seconds, 1s. 9d.; thirds, 1s. 8d.; fourths, 1s. 7d.; quillings, 1s. 6 $\frac{1}{2}$ d.; featherings, 11 $\frac{1}{2}$ d., chips, 5d. per lb.

ERGOT.—More business is reported done in Portuguese new-crop and prices asked are from 44s. to 45s. per lb., c.i.f., for early shipment.

EUPHORBIA.—Supplies of the herb are offered at 50s. per cwt., c.i.f.

GALANGAL ROOT.—A parcel for shipment from Hong Kong is quoted at 80s. per cwt., c.i.f.

GINGER.—African on the spot is 290s. per cwt.; for September shipment, 265s. c.i.f. Jamaican, No. 2, 510s. per cwt., and No. 3, 490s., spot.

GRINDELIA.—A parcel of f.a.q. herb offered in London at 285s. per cwt., ex wharf.

GUM ACACIA.—Kordofan cleaned sorts on spot, quoted at 130s. per cwt.; shipmen 119s., c.i.f.

HONEY.—Australian supplies remain scarce on the spot; prices are 92s. per cwt. in 60-lb. tins. Jamaican is offered at around 104s. per cwt. in 3-cwt. barrel while Argentine is 87s. per cwt. in 5-cwt. barrels, both ex warehouse.

IPECACUANHA.—Firm. Colombian is quoted at 52s. 6d. per lb., c.i.f., for shipmer. Offers of Nicaraguan for September shipment are from 57s. 6d. to 58s. per lb., c.i.f.

KARAYA.—Superior No. 1 gum on the spot is 440s. per cwt.; No. 2, 340s.

KOLA NUTS.—African halves on the spot in London are from 5 $\frac{1}{2}$ d. per lb.; to corner forward 4 $\frac{1}{2}$ d., c.i.f. Jamaican quarters, for shipment, 9d. per lb., c.i.f. London.

KRAMERIA.—Spot is 105s. per cwt. in bond (120s., duty paid).

LANOLIN.—Anhydrous is about £140 to £145 per ton and hydrous, £120 to £125.

LIQUORICE.—Anatolian natural whole root on spot in London is quoted at from 52s. 6d. to 55s. per cwt.; Syrian natural from 47s. 6d. per cwt. Turkish block juice quotations are from 170s. upwards, according to holder, duty paid. Turkish sticks 240s. per cwt., duty paid. Italian sticks 240s. to 475s. per cwt., duty paid.

MENTHOL.—Chinese on the spot is from 82s. 6d. per lb., duty paid. Brazilian is quoted about the same price.

MERCURY.—Spot quotations are from £73 to £73 5s. per flask ex warehouse.

MYRRH.—Steady. Aden selected sort are quoted at from £16 to £18 per cwt., the spot.

NUTMEGS.—West Indian 80's, quoted 4s. and unassorted at 3s. 10d. per lb., ex warehouse. East Indian for shipment is quoted at 4s. 9 $\frac{1}{2}$ d. to 4s. 9 $\frac{1}{2}$ d., c.i.f.

ORANGE PEEL.—Firm. Spanish bit quarters quoted at 1s. 9d. and ribbon 1s. 6d. per lb., duty paid. West Indian quarters, 1s. 6d. per lb. Tripolitanian thin cut ribbon, 2s. 2d. per lb.

ORRIS ROOT.—Florentine, now coming forward is offered at 160s. per cwt., ex warehouse.

QUASSIA.—Chips on the spot are offered at 30s. per cwt.; for shipment, 28s., c.i.f.

QUILLAIA.—Whole bark on spot is 15s. to 165s. per cwt.; for shipment, 140s., c.i.f. Cut bark is offered at 190s. per cwt., ex warehouse.

QUINCE SEED. — Cape on the spot are quoted at 3s. 6d. per lb.

RHUBARB.—Double Deer No. 1 is offered at 10s. per lb., duty paid (9s. 3d. in bond), with other grades of Chinese rough round at from 7s. to 9s. per lb., duty paid.

SEEDS. — Spot **ANISE**, Cyprus are 162s. 6d. per cwt.; Turkish, 150s., in bond (160s. duty paid). **CARAWAY.**—Dutch are easier, 120s. per cwt., now quoted duty paid in London. **CELERY.**—Indian sold at 1s. 10½d. per lb., spot London. **CORIANDER.**—Spot, Morocco offered at 100s. per cwt., duty paid (90s. in bond); Indian quoted at 130s. per cwt., shipment Morocco during the past week have been quoted at 77s. 6d. per cwt., c.i.f., but counter offers have been received back as high as 82s. 6d. per cwt., c.i.f. London, for August shipment. **CUMIN.**—Spot Cyprus are quoted at 235s. per cwt. and Indian, 230s. per cwt.; shipment: Cyprus quoted at 200s., Morocco, 220s., and Indian at 190s. per cwt., all c.i.f. London. **DILL.**—Indian in poor demand at 80s. per cwt., spot London. **FENNEL.**—Indian selling at 140s. per cwt., spot London; for shipment, 152s. 6d. per cwt., c.i.f., quoted. **FENUGREEK.**—Morocco on spot is 47s. per cwt., duty paid.

SENEGA. — Spot supplies are about 16s. 6d. per lb.; for shipment, 14s. 6d. per lb., c.i.f.

SENNA.—Tinnevely wet-crop leaves for September shipment are quoted as follows:—Prime No. 1, 1s. 3½d.; No. 2, prime, 1s. 1½d., and f.a.q., 1s. 0¾d.; No. 3, prime, 11½d., f.a.q., 11d.; No. 4, cleaned, 9½d., and f.a.q., 8½d. per lb., c.i.f. A parcel of Alexandria pods has sold at from 3s. 6d. to 6s. 6d. per lb., according to quality. Fresh parcels are awaited.

SHELLAC.—Firm. Spot quotations are: F.O.T.N., pure 385s.; F.O. Standard 1, 395s. and fine orange, 410s. to 490s. per cwt., ex-London warehouse.

SQUILL. — Italian white new-crop is offered from origin at 57s. 6d. per cwt., c.i.f. London.

STAPHISAGRIA. — Stavesacre seeds are offered at 3s. 8d. per lb., duty paid, ex wharf London.

STYRAX.—Spot is from 9s. 3d. per lb., duty paid, and 8s. 6d. in bond.

WAXES.—**BEES'.**—Dar-es-Salaam on the spot is 620s. per cwt.; August-September shipment, 560s., c.i.f. Benguela on the spot is 620s., duty paid; August - September shipment, 570s., c.i.f. **CANDELILLA.**—Spot supplies are offered at 625s. per cwt.; shipment, 615s., c.i.f. **CARNAUBA.**—Prime yellow, spot, 1,070s. per cwt.; afloat, 1,040; shipment, 1,020., c.i.f. **Fatty grey**, pot, 930s. per cwt.; shipment, 920s., c.i.f. **MONTAN.**—Reibeck crude on the spot is 35s. per cwt. **OURICURI.**—Prices are unchanged.

Essential and Expressed Oils

ALMOND. — English-expressed is from 6s. 6d. to 7s. 6d. per lb. Bitter essential oil (s.a.p.) is from 26s. per lb., upwards, as to grade.

BAY.—In short supply. West Indian is quoted at from 14s. 6d. to 17s. 6d. per lb., as to quantity.

BERGAMOT.—Scarce. Nominal spot quotation is 80s. per lb.

CARDAMOM OIL.—In short supply. English-distilled is quoted at from 455s. to 550s. per lb.

CITRONELLA.—Quiet. Ceylon is quoted at from 12s. per lb., spot. Java on spot is quoted at 13s. per lb.; for shipment, 10s., c.i.f.

CUBES.—English-distilled is offered at from 50s. to 55s. per lb. Imported is quoted at from 60s. to 65s.

EUCALYPTUS. — Scarce. 70 to 75 per cent. eucalyptol, for shipment, is nominal at 9s., c.i.f.; 9s. 6d. per lb. for spot supplies is quoted.

GERANIUM.—Quiet. Bourbon on the spot is from 165s. to 170s. per lb.

HYDNOCARPUS. — Spot quotations are about 2s. 7d. per lb.; for shipment, 2s., c.i.f.

LAVANDIN.—Spot quotations are in the region of 27s. 6d. to 29s. per lb., according to quantity. For new-crop, 27s. per lb. is asked.

LAVENDER.—French, 38-40 per cent. linalol, on the spot is quoted at 47s. per lb.; 40-42 per cent., 50s. "Mitcham" oil is about 130s. Spanish spike is from 20s. to 22s. 6d. per lb., on the spot.

NUTMEG.—English-distilled oil is about 55s. to 57s. 6d. per lb. Imported oil (B.P.) is about 37s. 6d. to 40s., duty paid.

OTTO OF ROSE.—Scarce. Turkish, 400s. per oz., spot, nominal.

PETITGRAIN. — Paraguay is offered at from 35s. to 37s. 6d., spot.

ROSEMARY. — Spanish on the spot is 9s. per lb., duty paid; new-crop to come forward, 3s. 3d., landed, duty paid.

SAGE.—Spanish is offered at 11s. per lb., spot.

SANDALWOOD. — Mysore oil on spot is from 82s. to 85s. per lb. East Indian, Dutch-distilled (95 per cent. santalol), 105s. per lb., duty paid. West Indian is available at 25s. per lb., spot. English-distilled, 90s. per lb.

SASSAFRAS.—Brazilian natural is offering at from 6s. 6d. to 7s. 6d. per lb., duty paid, spot, according to grade.

SPEARMINT.—Spot quotations are from 55s. to 58s. 6d. per lb., duty paid.

VETIVERT.—Bourbon is nominal at 250s. per lb., spot.

TRADE MARKS

From the "Trade Marks Journal," August 1

For all goods excluding pharmaceutical oils (5).
VICTORY-V, 685,064, by Fryer & Co. (Nelson), Ltd., Nelson.

For all goods (5).

NYRDAHL, 690,383, by Paul Eugene Pierre Baude, Paris. VASCULIT, 696,155, by C. H. Boehringer Sohn, Ingelheim am Rhein. PRECORTEN, 698,270, by The Crookes Laboratories, Ltd., London, N.W.10. CHOODLER, 698,907, by Marjorie Egerton Storey and William Henry Storey, Cambridge.

For all goods excluding medicated wines (5).

ASP, 697,816, by A.S.P. Chemical Co., Ltd., Gerrards Cross.

For pharmaceutical preparations (5).

NODOZ, 692,676, by Harrison Products, Inc., San Francisco. CYTEXIN, 695,816, by Glaxo Laboratories, Ltd., Greenford. NOVALLISATIN 696,803, by Sandoz, Ltd., Basle. LEBRALENE, 698,086, by Le Brasseur Surgical Manufacturing Co., Ltd., Birmingham. PREVISIONE, 698,768, by Les Laboratoires Français de Chimiothérapie, S.A., Paris.

For preparations of mineral salts for veterinary and pharmaceutical purposes (5).

VITA-MINDIF, 696,193, by Boots Pure Drug Co., Ltd., Nottingham.

For medicated preparations for the treatment of diseases of the chest (5).

TABASAN, 697,436, by Ayrton Saunders & Co., Ltd., Liverpool.

For sanitary belts (5).

PATRICIA, 697,996, by Robinson & Sons, Ltd., Chesterfield.

For non-saponaceous pharmaceutical preparations for veterinary use (5).

SCAMP, 698,071, by Boots Pure Drug Co., Ltd., Nottingham.

For sanitary substances, disinfectants, germicides, deodorants and insecticides (5).

AIR-FOUNT, 699,204, Merbart, Ltd., London, E.C.2.

For scientific instruments (9).

SETA Stanhope Engineering Co., Ltd., London, N.W.2.

For hypodermic and suture needles (10).

GLISSANDO, 697,419, by Florinda Kingdon-Ward and Harry Barton Wood, London, W.C.1.

From the "Trade Marks Journal," August 8

For medicated soaps, toilet shampoos, non-medicated hair lotions, and dentifrices (3).

STERAVLON, Imperial Chemical (Pharmaceuticals), Ltd., London, S.W.1.

For sterilising and sanitising preparations (5).

QUATERGENT, PANTERGENT, 598,172-4, by Cooper, McDougall & Robertson, Ltd., Berkhamsted.

For medicated toilet paper (5).

METEOR, 698,802, by Tissue Papers, Ltd., London, E.C.2. TARTAN, KITTI, 699,322-4, by Kittybrewster (Paper), Ltd., Aberdeen.

PRINT AND PUBLICITY

Finnish Importers.—The Finnish Association of Technical Traders, E. Esplanadik, 22 A. S. Esplanadig, Helsinki, has produced a pamphlet which lists importers of chemicals, etc.

Display Pieces.—J. C. Gambles & Co., Ltd., 299 Blackfriars Road, London S.E.1, have commenced distribution of a series of three display pieces for Odorono deodorant preparations.

Air Separation Plants.—A twelve-page booklet 11 in. x 8½ in., within glossy covers, published by Petrocarbon, Ltd., 170 Piccadilly, London W.1, describes the first air separation plant (for separating atmospheric gases) to be produced on a normal commercial sales basis in Great Britain.

Display Material.—HOBSON TRIMBLE & Co. Union House, Belvoir Street, Leeds, 10, are issuing a new range of display material for Hobson's Choice corn plasters, comprising a display card carrying ¼ gross of small size, display outer taking ¼ gross large size, and small "snapper" designed to hold one packet of each size.

Show Material.—J. C. Eno, Ltd., King George Avenue, Watford, Herts, have produced a new showcard size 9½ x 7½ in. for Eno's Fruit Salt based on an English colour photograph by P. C. Hennell and reproduced at the Mansfield factory of the Metal Box Co., Ltd. A 30 x 20 in. showcard is available for special window displays. The company have also produced a baby showcard an "crown" for the new pack of Dinneford's fluid magnesia, and a "cruet" dispenser for New-Skin.

Air Freight Booklets.—A new edition of the series of booklets issued by British Overseas Airways Corporation for manufacturers and shippers sending goods by air has been issued. Each now contains twenty large pages of essential information. Commodities for which charges are given include chemicals and pharmaceuticals; cosmetic and toilet preparations; surgical instruments; containers; essential oils; penicillin and streptomycin photographic and optical equipment; and scientific instruments. Copies from any forwarding agent or office of the Corporation.

Press Campaigns.—To support present campaign in the national Press for Elastoplast waterproof fabric dressings, T. J. SMITH & NEPHEW, LTD. Neptune Street, Hull, have made available 30 per cent. more display material for those products, including a new open-wire dispenser.—F. W. HAMSHIRE & Co., LTD., Sunnysdale, Derby, have booked full-page advertisements for Snowfire wave set in the "Daily Mirror," "Woman" and "Woman's Own."—S. MAW, SON & SONS, LTD., are running a comprehensive press advertising campaign of Velfin all wool sanitary towels.—HENDERSON, BROS. & Co., LTD., manufacturers of Hygeen brushes are concentrating on their bristle brush No. 301 in an August and September national advertising.—SPA BRUSHES, LTD., Chesham, Bucks, are nationally advertising their Spa Spearhead tooth-brush.—CUXSON, GERRARD & Co., LTD., Oldbury, Birmingham, have booked space in many national newspapers for Carnation corn caps.—O. SCRUTTON & Co., LTD., Barker Lane, York, have started a new national Press advertising campaign for Nurse Harvey's mixture.

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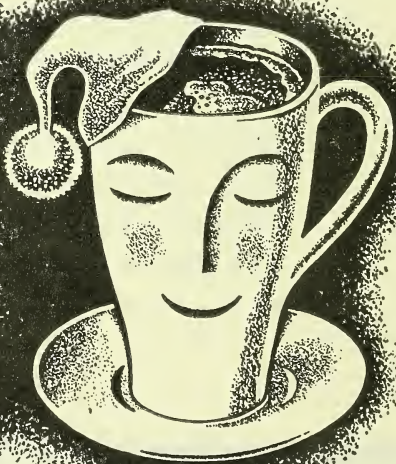
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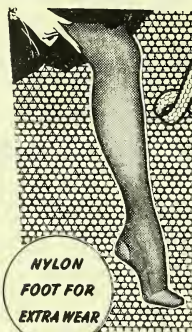
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- ★ **COOL TO WEAR**

LASTONET PRODUCTS LTD. Carn Brea, Redruth, Cornwall

Place orders NOW for these quick selling winter lines . . .

Stemcol
FOR COUGHS

Mistol
**AND MISTOL WITH EPHEDRINE
FOR COLDS AND CATARRH**

Nujol
**FOR KEEPING REGULAR
THE PLEASANT WAY**

*It pays you well
to stock and sell*

STEMCOL, MISTOL & NUJOL

*Also Cream of Nujol
and Cream of Nujol with Phenolphthalein*

STEMCO LTD., 128/132 ALBERT STREET, CAMDEN TOWN, N.W.1

Because these reliable family remedies always do the job they're meant to do—gently, safely and efficiently—they bring you the confidence and future custom of the families to whom you sell them.

Strong National advertising keeps up the demand for Stemcol, Mistol, and Nujol. Supporting display material is available free.

We Stock

Prescriptive Pharmaceuticals

for the
National Health Service

by
all the Leading Makers.
*Prompt Dispatch by Motor,
Rail or Post.*

Proprietary
Medicines.

Chemists'
Sundries.

Surgical
Dressings.

Toilet
Goods.

Send your Orders or Enquiries to~

BUTLER & CRISPE, LTD

ESTABLISHED 1777.

80-84, Clerkenwell Road,
LONDON, E.C.1.

TELEPHONE:
CLERKENWELL 3060

TELEGRAMS:
ALLUWANT, SMITH, LONDON.

WHIFFEN AND GENATOSAN

FINE CHEMICALS FOR INDUSTRY

*Uric Acid Pure • Uric Acid Technical • Allantoin
Alloxan • Alloxantin • 8-Chloro-theophylline
Substituted Thioureas*

WHIFFEN & SONS LTD • FULHAM • LONDON • SW6

FINE CHEMICAL DIVISION OF BRITISH CHEMICALS & BIOLOGICALS LTD

Telephone: RENown 3418

Telegrams: Whiffen, Walgreen, London

Fruit drinks that Diabetics can enjoy

THESE delicious Fruit Drinks are specially prepared without added sugar. Rose's Diabetic Lime Juice costs 3/3 a bottle; the Fruit Squashes—orange or lemon—are 3/- a bottle.

ROSE'S *Diabetic* FRUIT DRINKS

FOR

PATENTS

DRESSINGS

PILLS & TABLETS

DANGEROUS DRUGS

DRUGS & GALENICALS

ETHICAL PROPRIETARIES

SMITH & HILL
(Chemists) Ltd.

SIDNEY ST., SHEFFIELD, 1
Phone: 24321

LAMARNE'S

Adrenalene

The New Adrenaline Cream
for

RELIEF OF RHEUMATIC PAINS

- Prescribable on E.C.10
- Attractive Pack and Show material
- Adrenaline strength guaranteed min. 1 year
- Exempt from P.T.

RETAIL 5/- 2oz. Jar
TRADE 36/- per 13 to doz.
YOUR PROFIT 2/5 per Jar

★ Order from your usual C.F. Wholesaler

LAMARNE LABORATORIES LIMITED
20 HIGH ST., SUTTON, SURREY



PROPRIETARIES
SUNDRIES DRUGS
TABLETS & PILLS

FOR
CHEMISTS

*Manufacturing
Chemists*

Head Office & Works Mansfield Road Derby Telephone 4266 (4 lines) Branch Warehouse Grosvenor St. Ashton near Lyne Telephone 2816 (2 lines)

SCOTTON BANKS SANATORIUM
PHARMACEUTICAL DEPARTMENT
STERILE SOLUTIONS

COUNTY HOSPITAL, YORK

Wandsworth Hospital Group
St. James' Hospital
One tablet to be taken at night

Tablets should be kept out of the reach of children

THE MOUTH WASH
GLYCER. THYMOL. G.

STERILE BOTTLE
NAME.....
WARD.....
Pharmaceutical Laboratory
SALFORD HOSPITAL

MEMORIAL HOSPITAL
PHARMACEUTICAL DEPARTMENT
SPORT

THE MOUTH WASH
GLYCER. THYMOL. G.

PENICILLIN INJECTION B.P.
CC. 100 UNITS PER C.C.
FOR INTRAMUSCULAR INJECTION
CONTAINS A BACTERIOSTATIC
HEXHAM GENERAL HOSPITAL

One TEA spoonful to be taken three times a day

WARD:.....
ON OF PENICILLIN
DOSE..... 100 UNITS PER MIL.
MILS. BY INTRAMUSCULAR
INJECTION.
STORE BELOW IN FRIDGE
USE BEFORE...../195

THOMAS WAIDE & SONS LTD., LEEDS

Dr. Williams Pink Pills

Every Chemist needs to keep a stock of Dr. Williams Pink Pills. Year in and year out this reliable iron tonic goes on selling, bringing you a sure steady profit. Packets retail at 1/9 and 4/- including tax, and you can tell your customers the large size contains nearly *three times* as many pills as the small.

Write for details of advantageous Trade Parcel terms.

Add these also to your Orders —

PINKETTES

A reliable vegetable laxative specially made in tiny pilule form for easy taking. Inclusive retail price 1/9 — your supply can be included in the Pink Pills parcel terms.

Bablets

Infants' laxative and calmative, made as a crushable tablet for accurate dosage. Packets 1/9 — available in Pink Pills parcel terms.



G. T. FULFORD CO. LTD. (of Canada), 8 Royston Park Road, Hatch End, Middx

EDME "Autumn Sun"

EXTRACT OF MALT
WITH COD LIVER OIL (B.P.)
WITH FLAVOURING

THE CHOICE OF THE FIRST CLASS CHEMIST

EDME LIMITED, IMPERIAL HOUSE, 84-86, REGENT STREET, LONDON, W.
Phone: Regent 5563-4. Grams: Edme, Piccy, London. Works: Mistley, Essex.

CARNEGIES OF WELWYN

*manufacturers
of*

FINE CHEMICALS



CARNEGIE CHEMICALS (WELWYN) LTD



CARNEGIE QUININE WORKS LTD



CARNEGIE ORGANICS LTD

"CARNEBROS BRAND"

CARNEGIE BROTHERS (1949) LTD

WELWYN GARDEN CITY : HERTFORDSHIRE : ENGLAND
TELEGRAMS • CARNECHEM, WELWYN GARDEN TELEPHONE • WELWYN GARDEN 506 (4 lines)

OUR NEW SILCOT ADVERTISING SCHEME BEGINS IN THE NEXT FEW WEEKS IN THE WOMEN'S MAGAZINES



She's
IN THE KNOW!

Knows that there's
nothing to surpass
a cotton-wool towel
for comfort . . .
nothing to surpass
SILCOT.

SILCOT

SANITARY TOWELS

Versilla Soluble Towels
Comfortable Convenient Safe

*This is the first of the new series
of Silcot advertisements appearing in
magazines with a total circulation of
over 12,000,000*

The present series of Silcot advertisements in the women's magazines, featuring Miss Silcot, will be followed by a new series in the October magazines. Women will be reading the new advertisements in the next few weeks.

The striking illustrations, and the pointed sales message, of the new series will attract attention and bring more sales to the chemist.

*As part of the new advertising scheme
a series of coloured showcards will be
issued to Silcot stockists in the coming
months. These showcards will link up
with the magazine advertising. Display
them prominently and increase your sales!*

REGULAR ADVERTISING

means

REGULAR SELLING

SILCOT

Sanitary Towels

MACDONALD & SON LTD., HOPE MILLS, POLLARD ST., MANCHESTER



Cold-pressed

ALMOND OIL

This pure oil, expressed at our Wharf Road works without the use of heat, is quite the finest oil produced, and has long been a StaffAllens speciality



Samples are always available on request.



STAFFORD ALLEN & SONS LTD., Wharf Rd., London, N.1. CLerkenwell 1000

TAS/AL.269

B

Our New, Strong Publicity

WILL GREATLY INCREASE DEMAND

"Contented with Life" because

HARVEY'S MIXTURE



Mrs. Leighton, of 38 York Avenue, Bristol 7, whose baby boy is pictured here, writes:

"I would like to say how much I appreciate Nurse Harvey's and you can take me word that I will recommend it to anyone. My baby has been premature and when I came out of hospital I started to give it to him straight away. I can honestly say that he has never had wind or tummy trouble. We have never had a sleepless night while he was crying his teeth. He is now 14 months old and contented with life thanks to your excellent remedy."

Try Nurse Harvey's for your baby today. There's nothing like it for soothing little tummies and bringing sweet contentment sleep.

Get from all chemists and stores

There was a very marked difference after the first few doses"

This unsolicited tribute to Nurse Harvey's Mixture was sent by Mrs. Suevic of 18, Hudsell Street, Sandal, Wakefield, who writes: "My little son used to suffer terribly from wind and griping pains but now, thanks to Nurse Harvey's, he is greatly relieved. There was a very marked difference in him after the first few doses. He now sleeps peacefully. I shall certainly recommend it to all my friends."



Try Nurse Harvey's for your baby and see the difference, particularly at teething. 1/6 from all chemists and stores.

NURSE HARVEY'S MIXTURE

BIG advertising creates bigger sales. Our strong, new National Campaign has special appeal to Mothers, reaching at least 20 millions of them through the ever popular Women's and Home magazines and Daily and Weekly Press—so, be ready to meet the large demand for Nurse Harvey's Mixture by building up your stocks now. Nurse Harvey's is Babies' soothing mixture and Mothers' regular stand-by. It brings repeat trade—helps your turnover—it's a best seller. Order to-day!

NURSE HARVEY'S MIXTURE

- Display material always available on request.

O. SCRUTON & CO. LTD., BARKER LANE, YORK



*For every household's
medicine cupboard*

the safe and effective antiseptic for wounds, cuts, burns and abrasions.

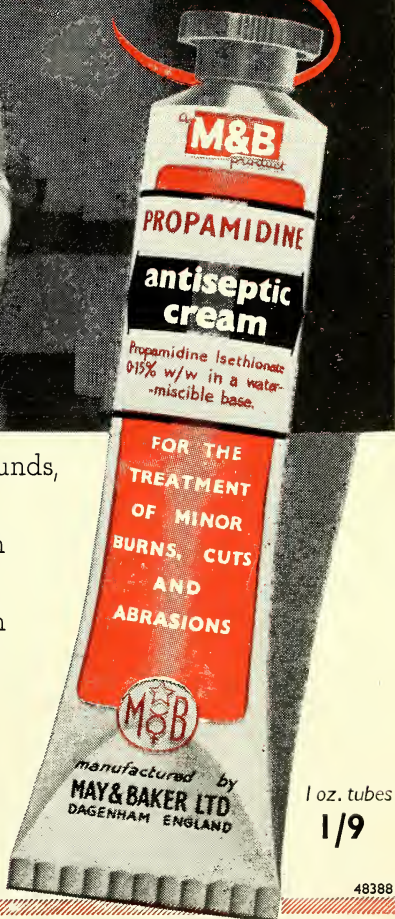
Bonus Terms of thirteen to the dozen in return for display services.

Attractive Showcards available on request.

PROPAMIDINE CREAM M&B

manufactured by:  **MAY & BAKER LTD**

distributors: **PHARMACEUTICAL SPECIALITIES (MAY & BAKER) LTD., DAGENHAM**



The
BARTLETT SERIES
 OF
*Nail
 White
 Pencils*

**The Perfect Manicure
 Pencil for Whitening
 the Nails**

also

THE BARTLETT SERIES
 of the

Perfect Eyebrow Pencil
 in Black, Brown and Dark Brown

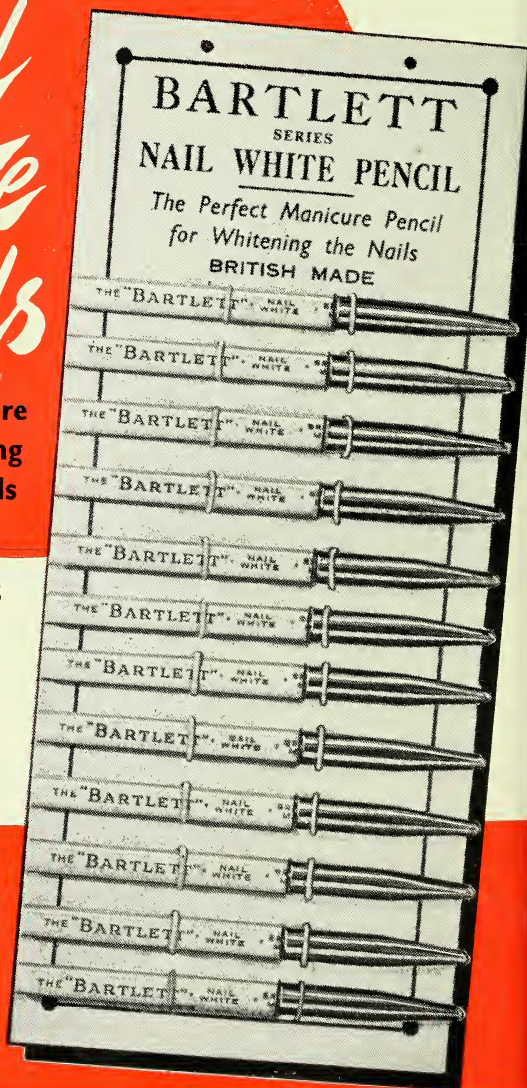
4/- dozen plus Purchase Tax
 Fixed price to public 10d. each

**ORDER FROM
 YOUR USUAL WHOLESALER**

Wholesale enquiries to:

**ALFRED FRANKS
 & BARTLETT
 CO., LTD**

**AUDREY HOUSE, ELY PLACE,
 LONDON, E.C.1**



PROGRESS IN PACKAGING

NEW "Weather-Control" PACK for Hygroscopic Products

Macleans Limited now use Plioform for packaging their MAC Brand Antiseptic Throat Sweets. Plioform stabilizes the sweets' moisture content, strongly resists their hygroscopic action, and protects their flavour and medical efficacy.



Plioform offers full protection against moisture-transfer

Like all products with hygroscopic tendencies MAC Brand Antiseptic Throat Sweets absorb moisture from the atmosphere, unless they are fully protected.

But now, Plioform — the brilliant new transparent packaging material — is here! And full protection is guaranteed. For packed inside a gleaming clip sealed Plioform bag, *before they are placed in their cardboard containers*, the sweets are safeguarded from moisture transfer. They lose none of their consistency and their quality is protected, too. What's more, their full flavour and medical efficacy is maintained from factory to consumer.

Plioform gives this unique protection because it is proof against air, damp and moisture-vapour. Plioform works by sealing wanted moisture *in* and unwanted moisture *out*. The "weather" inside the pack stays exactly the same, from the time it leaves the factory until it reaches the customer. Moist products such as surgical dressings; and

viscous products like cream shampoos, retain all of their moisture content. Dry or hygroscopic products such as medicinal tablets and capsules and throat sweets maintain their original consistency. What's more Plioform is tasteless, strong and completely hygienic.

Plain or printed in gay colours, Plioform's transparent brilliance makes a tempting display. And that means sales! But it can also be used as a liner-bag or a lining for paper or foil. One way or the other you will be seeing more of Plioform — the most practical packaging material in use today.

These are a few of the well-known products also packed in Plioform: Band Box Shampoo Poulitice Packs by J. C. Eno Ltd. · Mary Drake Soap · Medical Dressings by T. J. Smith and Nephew Ltd. · Toilet Preparations by Camilatone Ltd.

**GOOD THINGS
ARE BETTER IN**

Plioform[★]

★ TRADE MARK The Goodyear Tire and Rubber Co.

A CHEMIST'S business ought to be fully insured. The "Unity" policy covers all these risks more economically and conveniently than separate policies—one policy, one premium. You need not wait until existing policies expire—premium allowance can be made for these. Post the coupon below for a full answer to your insurance problems.

The Provincial "UNITY" Policy



SEND COUPON NOW
for **FREE COPY** of this
publication

1. FIRE
 2. BURGLARY
 3. HOUSEBREAKING
 4. PLATE GLASS
 5. SHOP FRONT
 6. AIRCRAFT, ETC.
 7. LIGHTNING
 8. EXPLOSION
 9. EARTHQUAKE
 10. RIOT
 11. CIVIL COMMOTION
 12. LOSS OF PROFITS
- due to any of the above risks or to increased working expenses consequent upon them.
13. HOLD-UP
 14. CASH-IN-TRANSIT
 15. EMPLOYERS' LIABILITY
 16. PUBLIC LIABILITY (including Handcarts, Cycles, Food Poisoning, etc.)

Please send me free copy of your folder describing the Provincial "Unity" Insurance Policy.

Name

Address

Trade..... C.D.

PROVINCIAL INSURANCE CO. LTD., Stramongate, Kendal, Westmorland
CVS-

THE PUBLIC STOP AND LOOK-



AT AN 'ASPRO' FESTIVAL DISPLAY

The window display that makes the public stop is the display that is doing its job. The 'ASPRO' Festival display attracts and holds the public because the Festival is news — thousands are visiting exhibitions all over the country — columns of newspaper space are being devoted to it. You can't go wrong when you combine the best-known event of the year with the best-known medicine in the country in your window display.

SHOW IT NOW AND GET THE FULL INTEREST VALUE!

Made in England by ASPRO LIMITED, Slough, Bucks.

PROFITABLE EVERYDAY LINES—

"Carnation" Corn Caps are outstanding amongst the "C.G." range of best sellers. Steadily increasing sales arise from recommendations by satisfied users, backed by constant national advertising.

'CARNATION' CORN CAPS

— A 'C. F.' LINE —

★ NATIONAL ADVERTISING BOOKED IN

DAILY MAIL
DAILY HERALD
NEWS CHRONICLE

DAILY MIRROR
DAILY GRAPHIC
GLASGOW RECORD

BELFAST TELEGRAPH
ILLUSTRATED
PICTURE POST

★ EFFECTIVE SALES AIDS AVAILABLE WITH ORDERS



★ GOOD PROFIT

RETAIL	PRICE	1/1½	BOX (INC. TAX)
TRADE	PRICE	7/6	DOZ. (PLUS TAX)

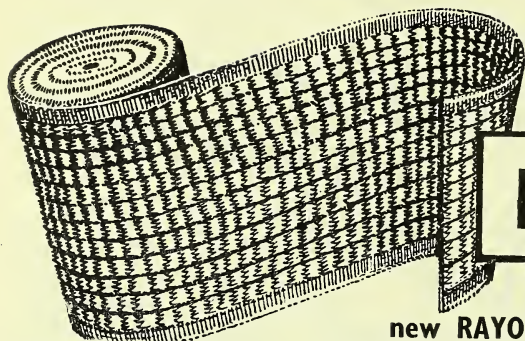
★ EXTRA DISCOUNTS

£5 ORDER LESS 2½%; £10 ORDER LESS 5%.
These extra discounts apply to purchases of all our Plasters, whether bulk or proprietary.

A PRODUCT OF

Cuxson Gerrard & Co. Ltd.

OLDBURY, BIRMINGHAM



RAYOLAST

The
new RAYON-ELASTIC support bandage
MANUFACTURED IN ENGLAND FROM ALL-BRITISH MATERIALS

"RAYOLAST" bandages offer the following advantages over the wool-cotton crepe bandages:

- Light weight.
- Low incidence of skin irritation.
- Instantaneous absorption.
- Prolonged elasticity even after frequent washing.
- Durability approximately four times greater.

AVAILABLE IN

2 inch, *2½ inch, *3 inch, *4 inch & 6 inch widths.

* N.H. Tariff Items.

* RAYOLAST Rayon - elastic Bandages are approved by the Ministry of Health for supply on N.H.S. Form E.C.10.



HARKER STAGG LIMITED

EMMOTT STREET, LONDON, E.1

We invite your enquiries and orders for
**DRUGS, GALENICALS,
BROMIDES, CITRATES,
CHLORAL HYDRATE,
IODIDES, TABLETS,
SURGICAL DRESSINGS,
CHEMISTS' SUNDRIES,**
at competitive prices

BIOREX

LABORATORIES LTD.

WHOLESALE AND MANUFACTURING CHEMISTS

51 EXMOUTH STREET, LONDON, E.C.1

Telephone: TERMINUS 9494 and 1431

*Post orders executed promptly
Daily delivery service in the
Greater London Area*



High Potency
COD LIVER OIL CAPSULES

- 1 Vitamin A with additional Vitamin D
- 2 Vitamin E additional to Vitamins A & D
- 3 Vitamins E & K additional to Vitamins A & D

Guaranteed by 50 years' experience in the production of COD LIVER OIL

**ALTRA LTD., 77, South Audley Street,
LONDON, W.1 Telephone: GROSVENOR 6992**

N23



Victory V

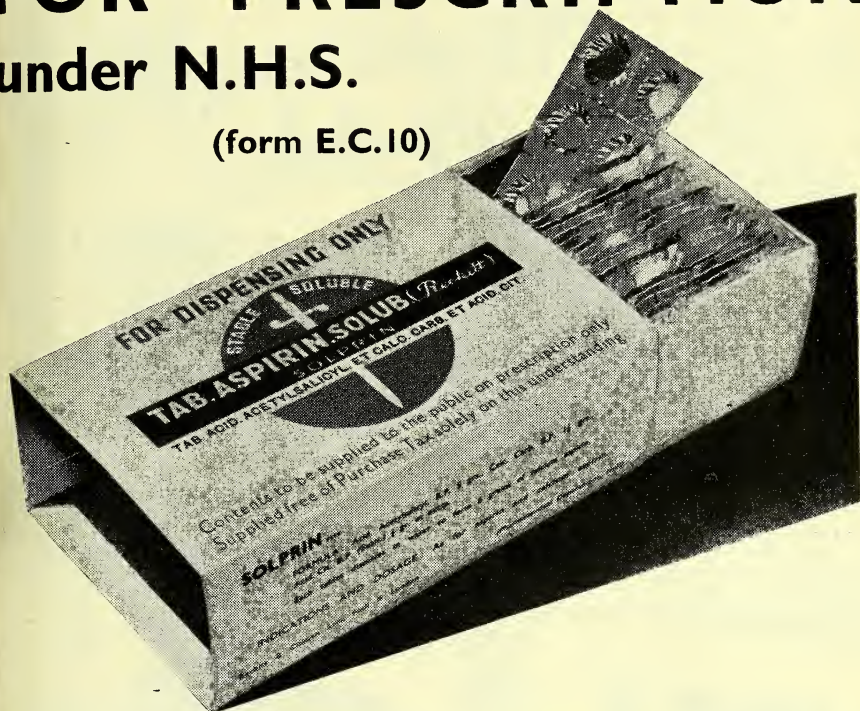
GUMS & LOZENGES

FRYER & CO. (Nelson) Ltd., NELSON, LANCs.

FOR PRESCRIPTION

under N.H.S.

(form E.C.10)



RECKITT & COLMAN LIMITED announce the introduction of 'Solprin', a soluble aspirin for the dispensing of prescriptions. Solprin is not advertised to the public.

The problem of prescribing calcium aspirin free from decomposition products is solved. Solprin, a stable preparation in tablet form, combines the

convenience of aspirin tablets with the therapeutic advantages of pure calcium aspirin. Its analgesic, sedative and anti-rheumatic properties, and the fact that even in large amounts it is unlikely to produce gastric disturbances, have been confirmed over a period in clinical trials carried out in leading hospitals.

The SOLPRIN prescription pack contains 300 tablets, air sealed in foils of 6. Price 7/- per box (free of P.T.)

AVAILABLE IN THE U.K. AND NORTHERN IRELAND ONLY

Blue Orchid



A typical Blue Orchid Christmas pack containing the new perfumed Cologne and Toilet Soap, retail price 7/11d.

NEW PRODUCTS AND NEW PACKS!

Backed by even more advertising during the Autumn, Blue Orchid "Perfume Harmony" products make their bow in a new dress! Make sure you are stocked to meet the demand—and make sure of seeing the new packs when our representative calls!

Delavelle

35 OLD BOND STREET, LONDON, W.1

Orders to: 38-46 Orsman Road, London, N.1.

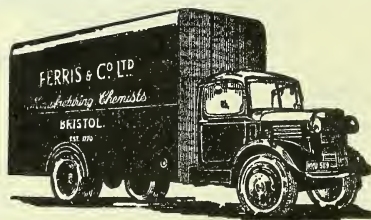
BEAR Brand HONEY

the cream of the world's honey crops



Available in 7lb. and 56lb. tins and in barrels; also supplied in ½lb. and 1lb. jars.

L. Garvin & Co. Ltd., Isleworth, Middx. Tel: HOUmslow 3483



REGULAR ROAD DELIVERIES

In the West of England and South Wales Areas

The House in the West for all Chemists' Supplies

Send us your orders for prompt and careful attention.

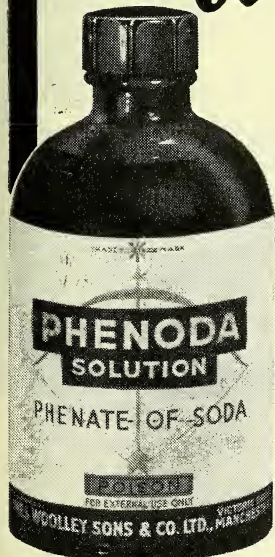
**FERRIS & COMPANY LTD.
BRISTOL**

Manufacturing and Wholesale Chemists

Telephone:
BRISTOL 21381

Telegrams:
FERRIS, BRISTOL

*Popular for
over 50 years!*



Although two generations have passed since its inception, the popularity of Woolley's "Phenoda" remains constant. It is still recognised, particularly by dental and medical practitioners, as an extremely effective germicide when used as a mouth-wash, gargle or as a dressing for cuts, burns and bruises.

For these every-day purposes, it can be safely recommended for the home medical chest.



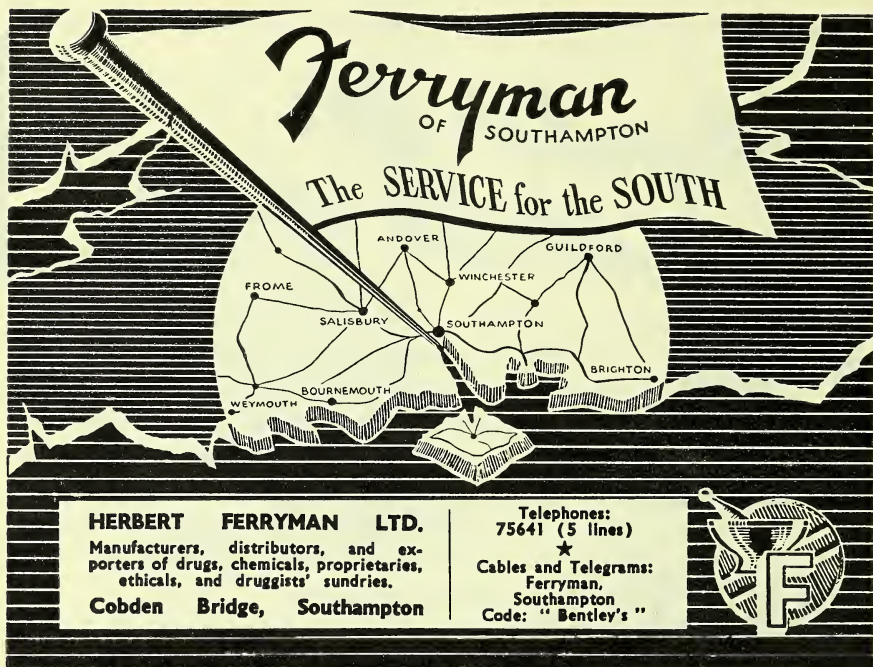
WOOLLEY'S
PHENODA
BRAND
SOLUTION (Phenate of Soda)

WP2a

RETAIL PRICES : 1/10d. and 3/3½d.

Trade Price : 5 oz. 12/- doz. plus 4/- Tax. 10 oz. 21/- doz. plus 7/- Tax.

JAMES WOOLLEY SONS & CO. LTD., Victoria Bridge, MANCHESTER, 3



Ferryman
OF SOUTHAMPTON

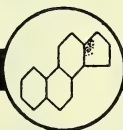
The SERVICE for the SOUTH

FROME ANDOVER WINCHESTER GUILDFORD
SALISBURY SOUTHAMPTON BRIGHTON
BOURNEMOUTH WEYMOUTH

HERBERT FERRYMAN LTD.
Manufacturers, distributors, and ex-
porters of drugs, chemicals, proprietaries,
ethicals, and druggists' sundries.
Cobden Bridge, Southampton

Telephones:
75641 (5 lines)
★
Cables and Telegrams:
Ferryman.
Southampton
Code: "Bentley's"

A C R O D A



P R O D U C T

OLIVE OIL

*We import directly and
handle only the finest edible,
and pharmaceutical B.P. Oils*

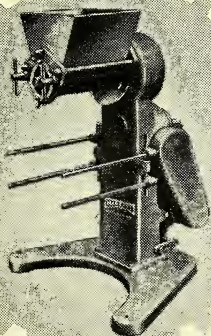
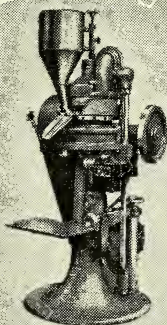
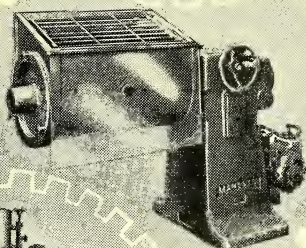
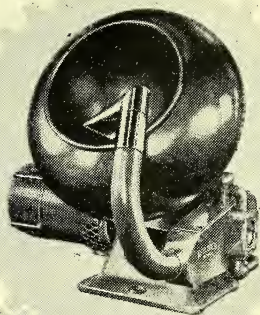
CRODA LIMITED

Administrative Offices : **CRODA HOUSE • SNAITH • GOOLE • YORKS**
Telephone • **SNAITH 77** (three lines) ALSO AT LONDON • MANCHESTER • BRADFORD

MANESTY

Precision-built Machinery

Leading tablet makers throughout the world have long recognised that the name MANESTY on tableting machinery is an insurance of all that can be desired in accuracy of construction and reliability of performance. Behind the name MANESTY there now lies the skill and experience of its associated company—John Holroyd & Co. Ltd., who for over 70 years have specialised in the production of machine tools and precision gearing—and who made rotary tablet machines more than 50 years ago.



- ❶ B.C.P.2 Bench Coating Pan.
- ❷ "H" Stainless Steel Mixer.
- ❸ B.3 Rotary Tablet Machine
- ❹ "Rotorgran" Oscillating Granulator.

MANESTY
MEANS PRECISION-BUILT

For details of Manesty Machines and Technical and Experimental Service write to:

MANESTY MACHINES LTD

DEPT. 5

SPEKE

LIVERPOOL 19

Telephone: Hunts Cross 1972 Telegrams: Manesty Liverpool

TABLET MACHINES • COATING PANS • GRANULATORS • MIXERS • AUTOMATIC WATER STILLs

BROVON

Asthma

INHALANT

Brovon Inhalant combines the rapid action of adrenaline with the slower but more persistent action of atropine methylnitrate and papaverine. An excellent example of synergism, it has proved to be an ideal combination for the relief of asthma and the bronchiolar spasm often present in chronic bronchitis and emphysema.

Already well recognised for the relief of asthma, Brovon Inhalant is being widely advertised to the medical profession. It is a reputable preparation for which pharmacists may expect an ever-increasing demand.

Supplied in bottles of $\frac{1}{2}$ oz. 7/6; 1 oz. 13/6; 2 oz. 26/3; 4 oz. 51/- Exempt from purchase tax.

BEST RESULTS ARE USUALLY OBTAINED BY INHALATION FROM A DEEDON INHALER



MOORE MEDICINAL PRODUCTS LTD
ABERDEEN LONDON OFFICE: 64 GLOUCESTER PLACE, W.1. LONDON
 WELBECK 5718/9.

KAY

**LINES THAT BRING
SUMMER PROFITS**

Flycatchers:

Honeypot, Viper, Tom Thumb, Gorgon
 APEX Insect Guns
 ERA Moth Killers
 ERA DDT Flyspray
 DAK (Birdlime) for Mice and Rats—
 tubes 1/-; tins 1/9, 3/-

Write for samples and prices:

KAY BROTHERS LTD.
 Kayborough, Reddish, STOCKPORT

BIG SALES from this
NEW BOTTLE

good
looking

shaped
for
safety

natural
grease
solvent



powerful
germ
killer

kind to
delicate
skins

This first class
 selling line now has
 the additional appeal of the
 new safety shape bottle. The strong advertising
 campaign in the National and Provincial press
 and magazines with the National Poster campaign
 ensures big sales—stock up NOW with:—

**DRUMMER PINE
DISINFECTANT**

Made by
 WM. EDGE & SONS LTD., BOLTON

A343



**THIS "DISPENSER" WILL
INCREASE YOUR SALES**

In time of
pain

'CODEMPRIN'
TRADE MARK



Gives
speedy and
more effective
relief

1/3 for 10

A BURROUGHS WELLCOME & CO. PRODUCT

Your customers will be immediately attracted by the 'Codemprin' dispenser-outter of 2 doz. tubes and by the new showcard.

A bonus of 13 to the dozen is offered on orders of 2 dozen.

★ Its price (1/3 for the tube of 10), its size (slips into handbag or pocket) and its effectiveness (contains four active ingredients), give 'Codemprin' a special appeal to the customer for whom aspirin is "not enough".

'CODEMPRIN'
TRADE MARK



BURROUGHS WELLCOME & CO. (The Wellcome Foundation Ltd.) LONDON

THE MENOPAUSE . . .

*Rapid control
of the symptoms*

Lynoral derived from the natural oestrogen controls menopausal symptoms without side effects. It also has the advantage of simple oral administration. The mental depression commonly associated with the menopause is speedily relieved and the feeling of well-being induced is most striking.



LYNORAL

ETHINYL OESTRADIOL TABLETS

Tablets of 0.01 mg., 0.05 mg. and 1 mg. (scored) Tubes of 25. Bottles of 100.

Price List on request



ORGANON LABORATORIES LTD

BRETENHAM HOUSE, LONDON, W.C.2

Telephone : TEMple Bar 6785/6/7 and 0251/2.

Telegrams : Menformon, Rand, London

*R_x**Sterathal Suspension**Mitte 3iv**Sig. 3ii q.i.d.*

for

INFANTILE GASTRO-ENTERITIS

Sterathal Suspension contains phthalyl sulphacetamide (10.5%)—a new sulphonamide of low toxicity which exerts maximum chemotherapeutic activity in both the lumen and wall of the intestinal tract. Systemic absorption is negligible and also included is Pectin (2.5%), a de-toxicant in the large bowel and Kaolin (10%), a protective and adsorbent in the small intestine.

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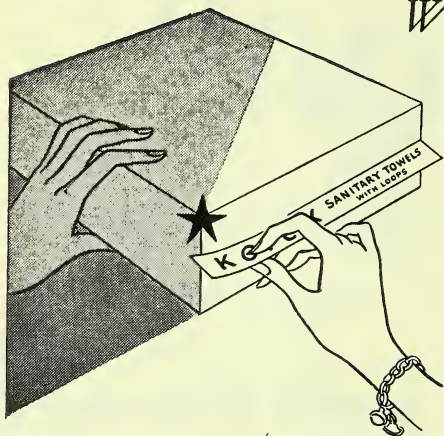
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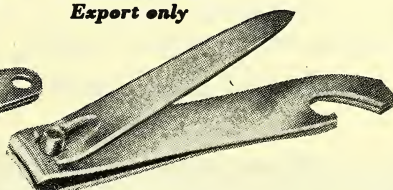
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not dismissed...

fresh evidence has come to hand to prove that the case in question must be asked to undergo further trials.

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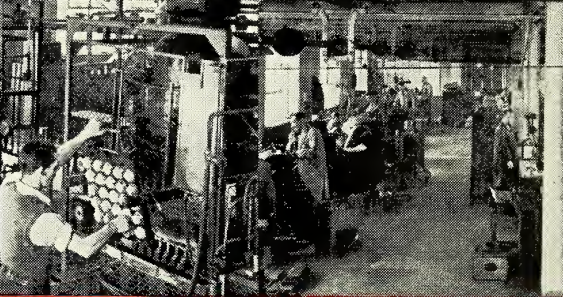
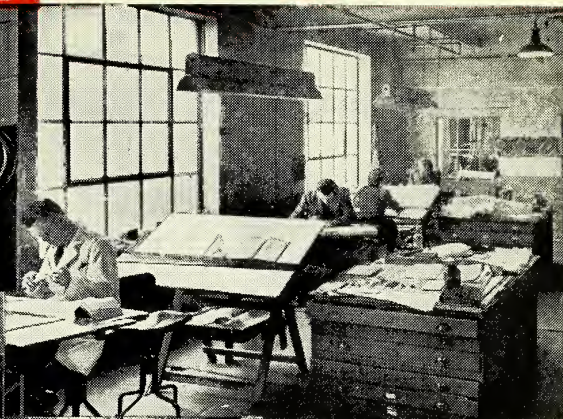
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We can supply moulded closures to special designs or in stock moulds in opaque translucent colours. The complete co-operation between our Bottle and Cap works ensures efficient filling of your product."

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Lady

passing

~~by~~” *buy*



...but they're not ALL Little Old Ladies

No, indeed . . . good customers though little old ladies often are. Many of them are young people in a hurry and who can be stopped and brought in to your counter if your window strikes the right chord.

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'ANADIN' . . . 'KOLYNOS' . . . these are universal; 'ANNE FRENCH' registers with all beauty conscious females — so let's just say 'all females'. 'REUDEL' and 'FREEZONE' for all who feel their feet, and that is both sexes and all ages . . . 'BiSoDoL' and 'BiSoDoL' Rollmints — not only for men (though *what* a puller for the businessman). And for the mother with the young family 'PINEATE' Honey Cough-Syrup.

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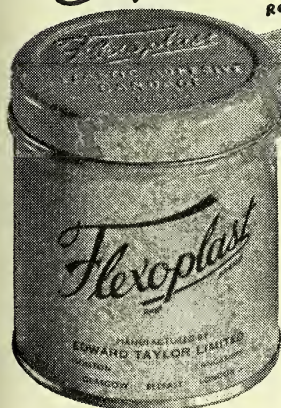
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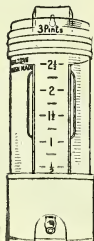
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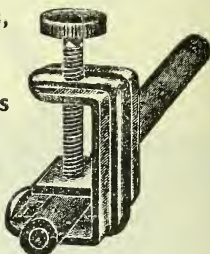
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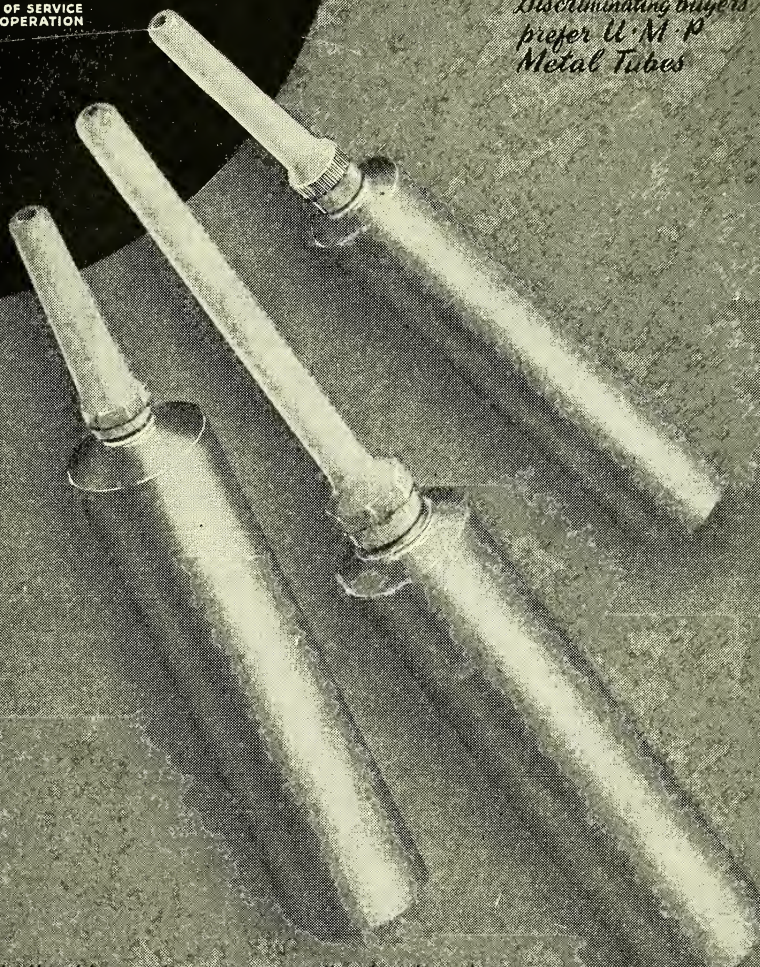
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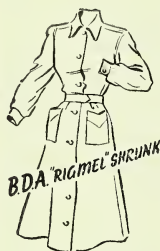
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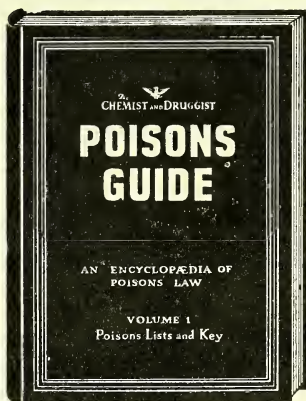
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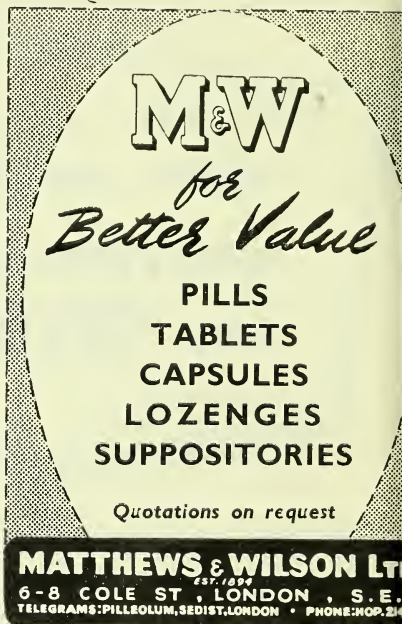
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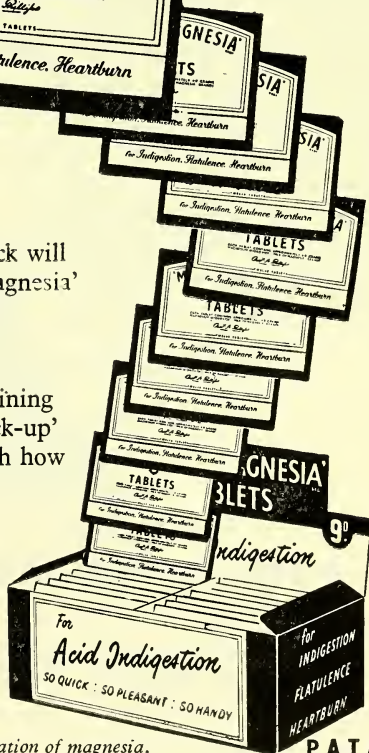
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